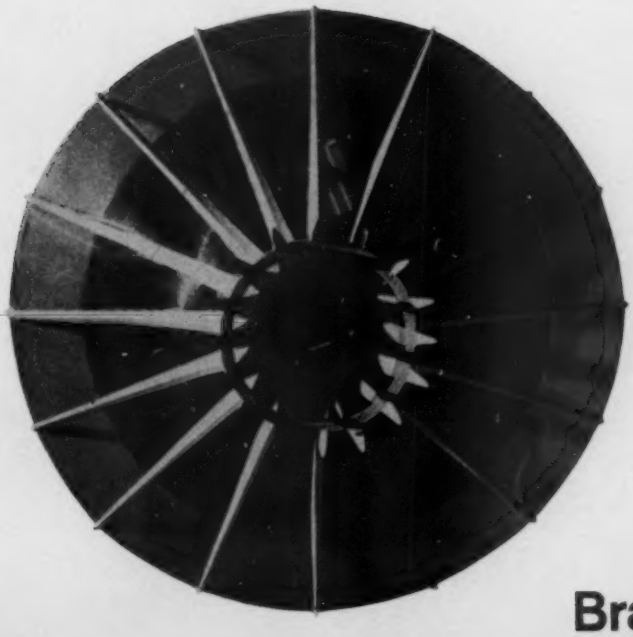
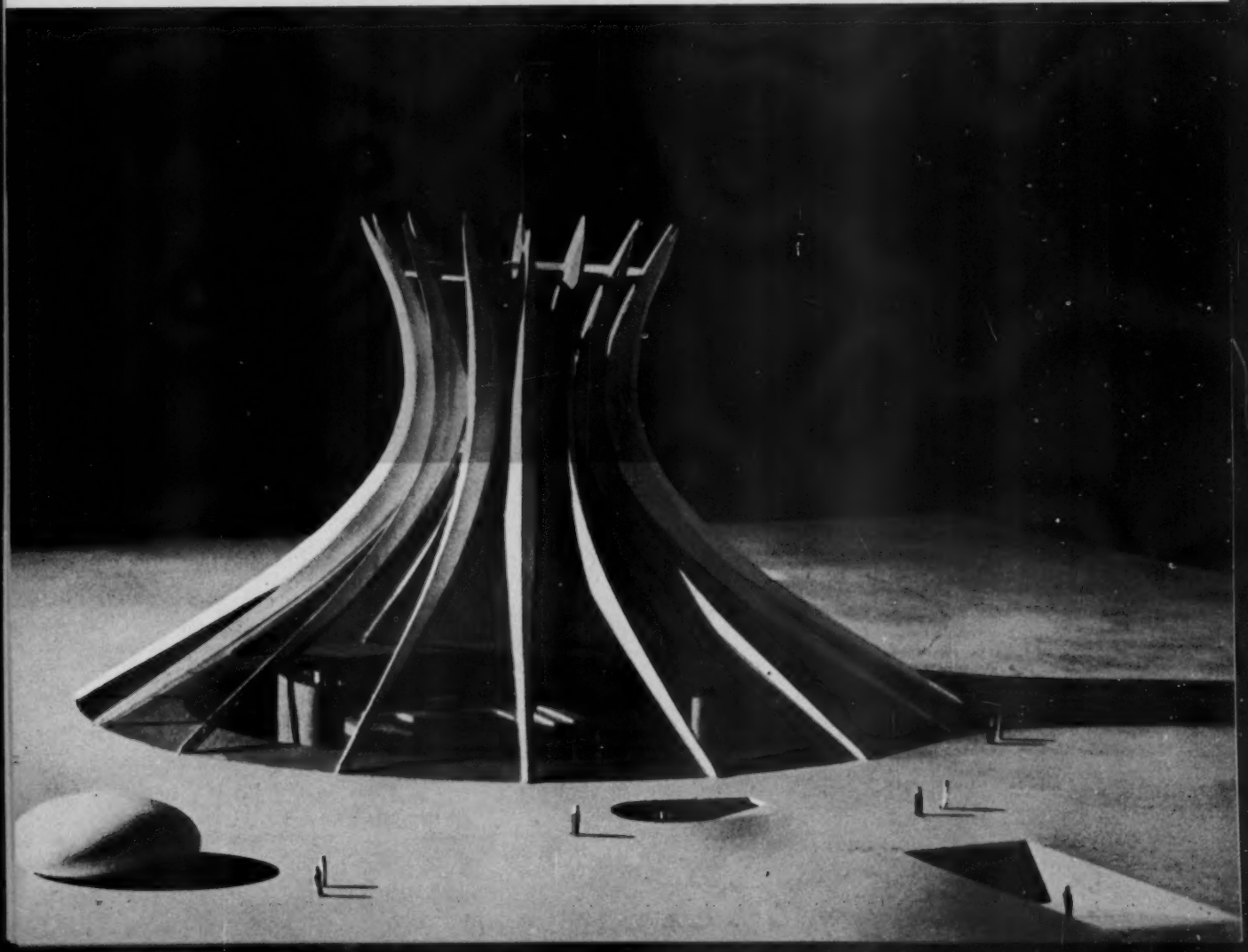
31 The Architect & Building News

3 August 1960 V. 218/4 1s. Weekly



Brasilia



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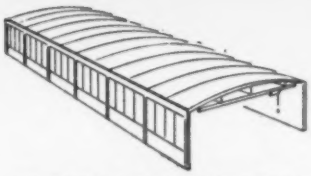

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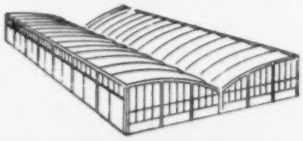

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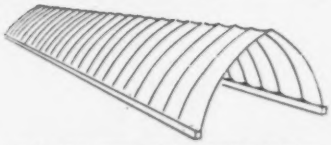

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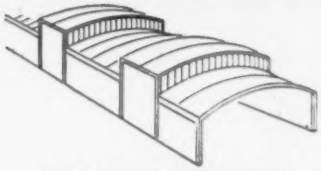

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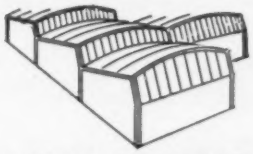

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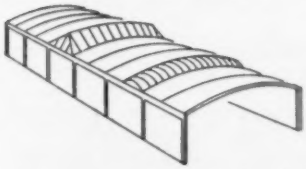

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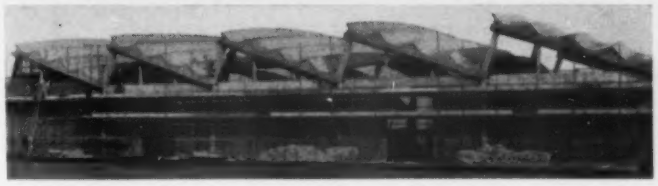

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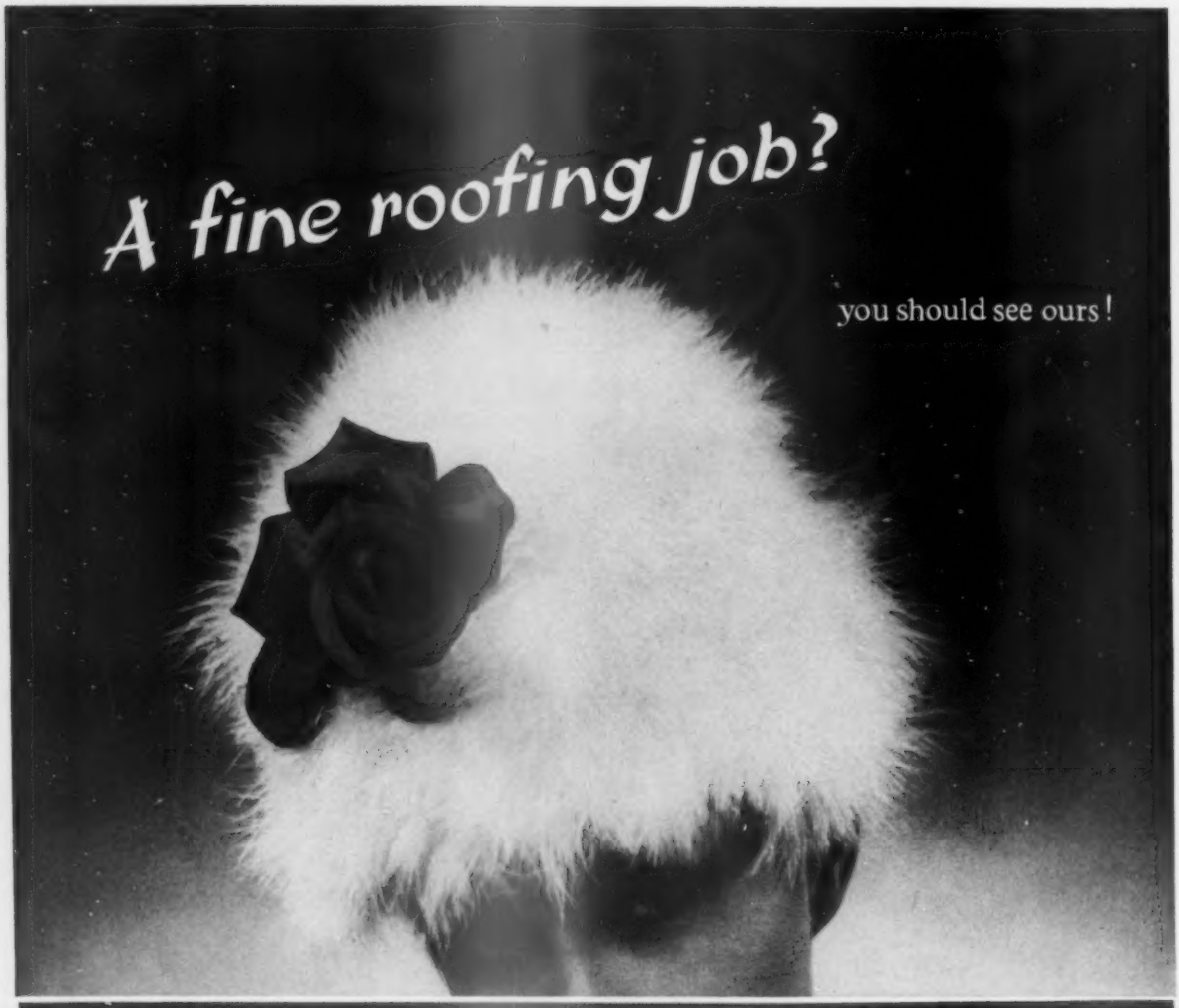
'Roof' shown here by Edward Mann



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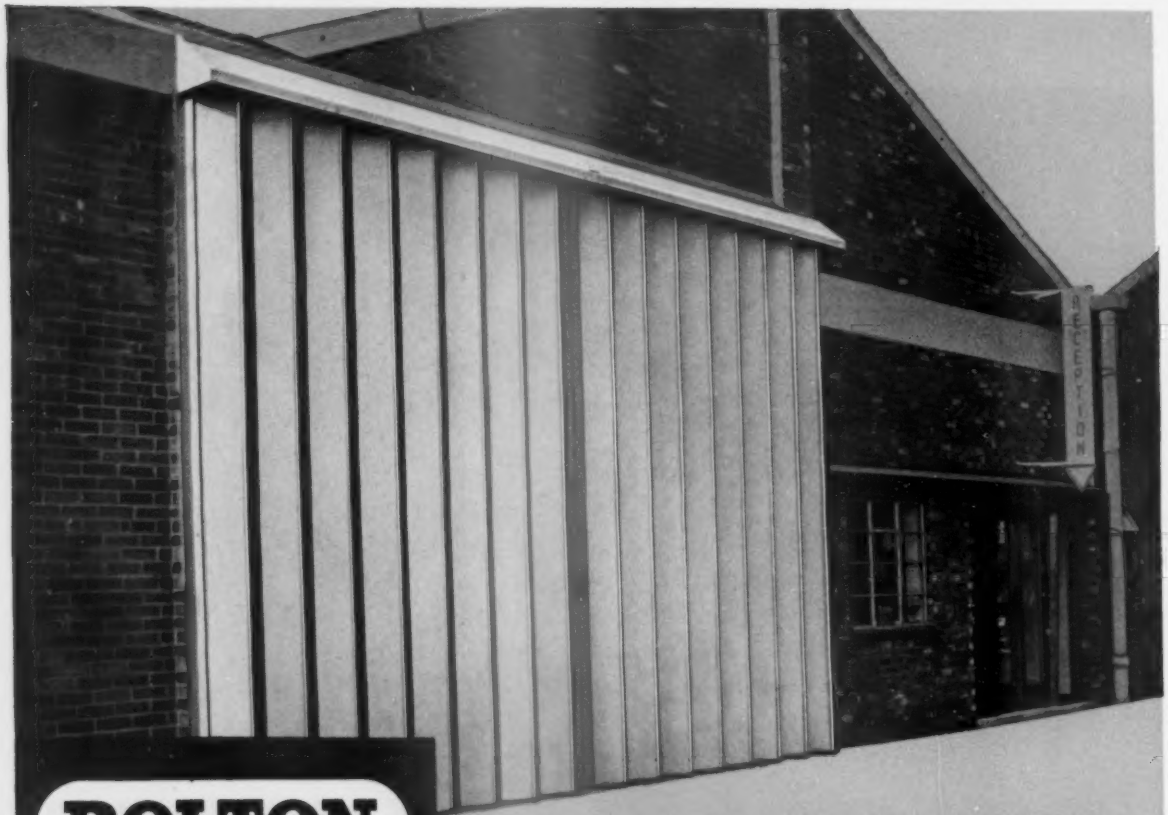

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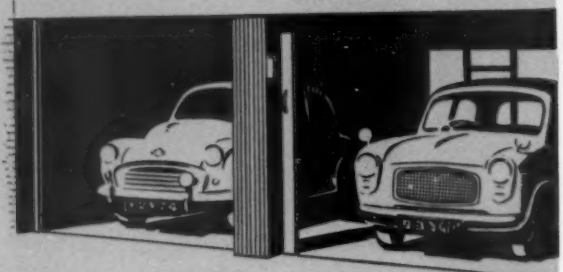

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CRAWLEY NEW TOWN. Architect: H. S. Howgrave-Graham, A.R.I.B.A., A.M.T.P.I., *Chief Architect to The Crawley Development Corporation.*

100,204, 100,205, 100,206 – coo, what A lot of windows – all by Williams & Williams

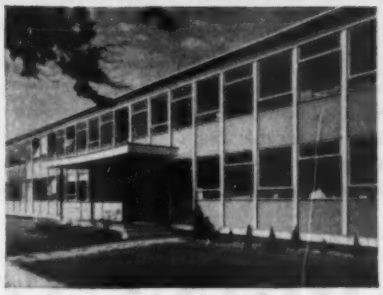
The final neighbourhood unit Gossops Green—where wide use has been made of Williams & Williams projected windows — is the 9th and last of the neighbourhood units. It is nearly finished and is already partly occupied.

CRAWLEY NEW TOWN contains an established Town Centre, a flourishing Industrial Area, 9 neighbouring units, 53,000 prosperous inhabitants and well over 100,000 Williams & Williams windows. Steel windows and curtain walling on the Post Office, purpose made steel windows in the Town Centre and steel windows to B.S.S. made to a special size to meet the architects' requirements for the houses.

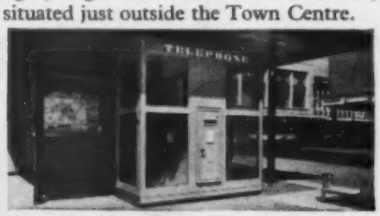
The birth of the Z range The 2′ module standard window was developed for the architects of the new towns. These Williams & Williams Z range windows at Northgate went up in 1950 — they were among the first in the country.

Tailor made standards Crawley New Town also saw the development of the now established 'CO' standard window — specially made to an intermediate height of 3′ 6″. These particular ones at Southgate were specially made by Williams & Williams for Crawley Development Corporation.

Standard factories too To bring in the small manufacturer — and so balance the economy of the area — small factories like this one were built to a standard design. Here Williams & Williams purpose made steel windows and Aluminex Patent Glazing have been used for the sidewalls and Williams & Williams roof lights supply daylight overhead.



Curtain Walling on the Post Office Williams & Williams curtain walling with yellow in-fill panels give a light, bright look to the new Post Office, situated just outside the Town Centre.



The Williams & Williams phone boxes. The famous phone boxes in the Town Centre were specially made by Williams & Williams to the design agreed between the architects and the G.P.O.

A new way with dustbins Standard equipment throughout Crawley are these dustbin units. The louvred steel front opens on to a steel box which has a hinged lid and contains the dustbin. Rubbish is disposed of from inside the kitchen and collected from outside the house. Specially designed and made for the Crawley Development Corporation by Williams & Williams.

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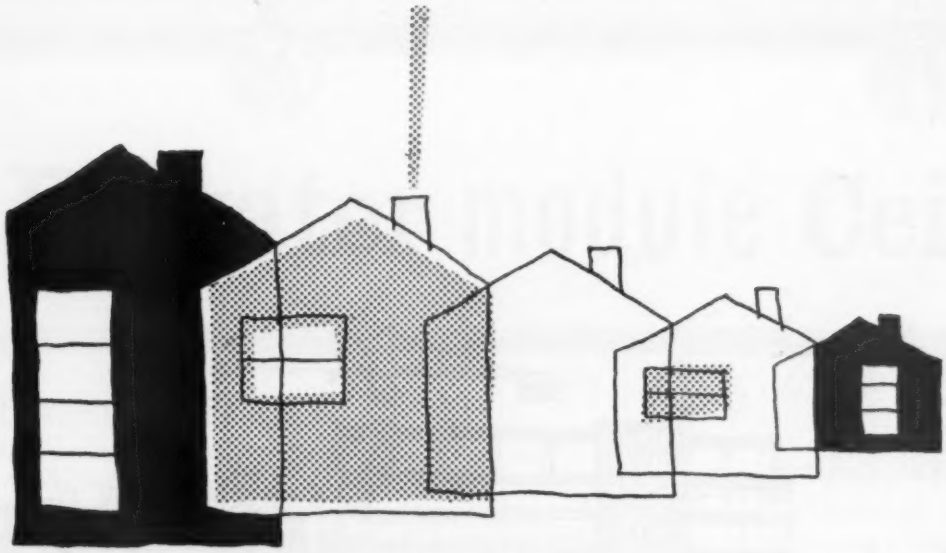

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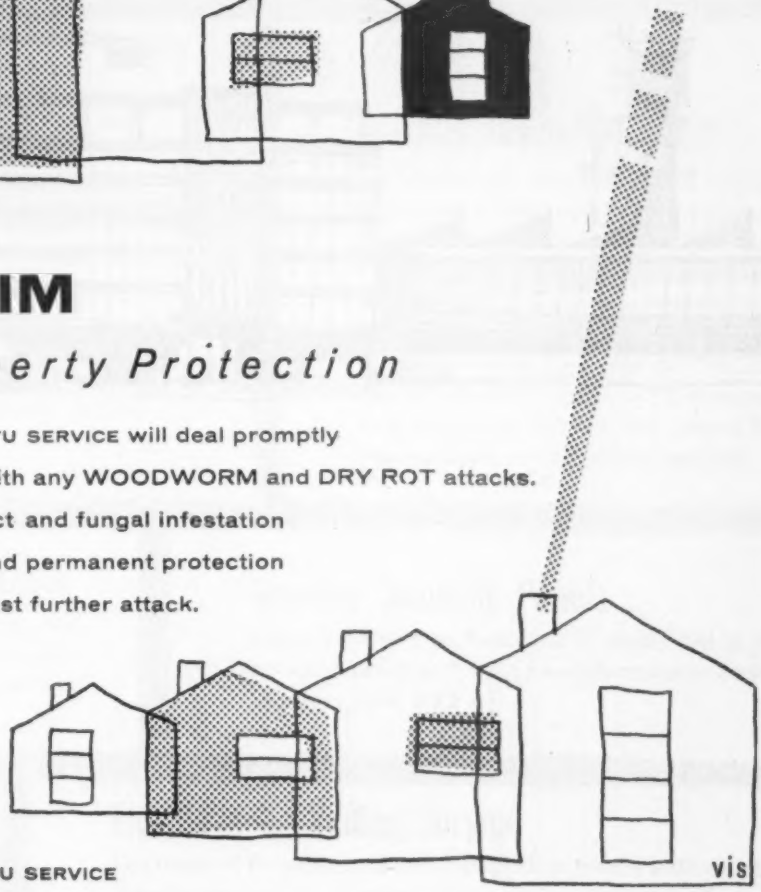

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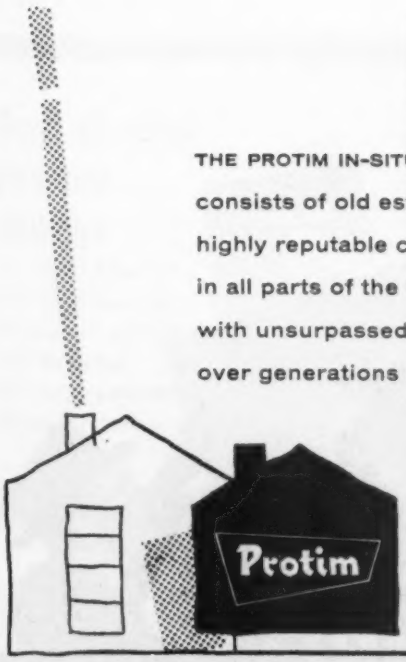

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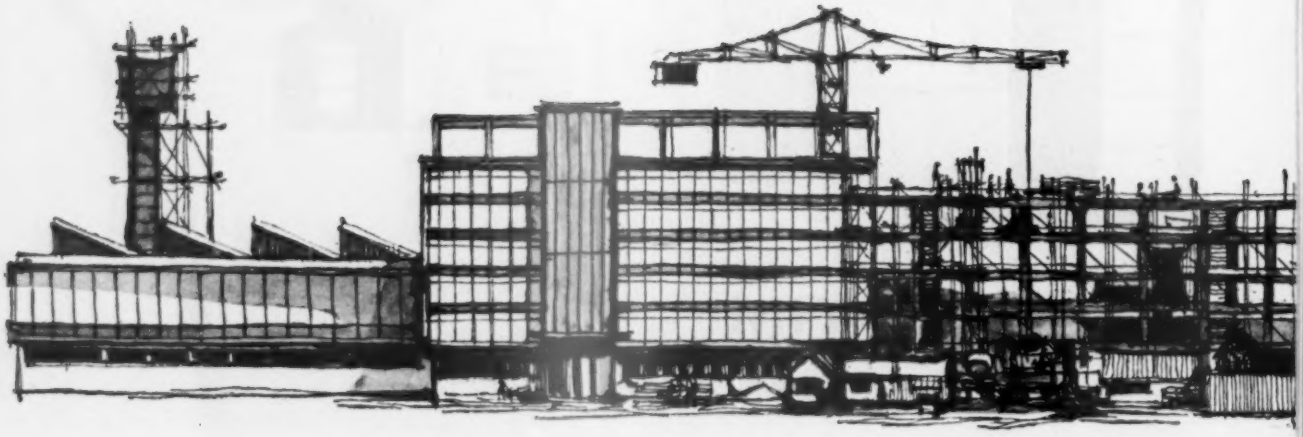

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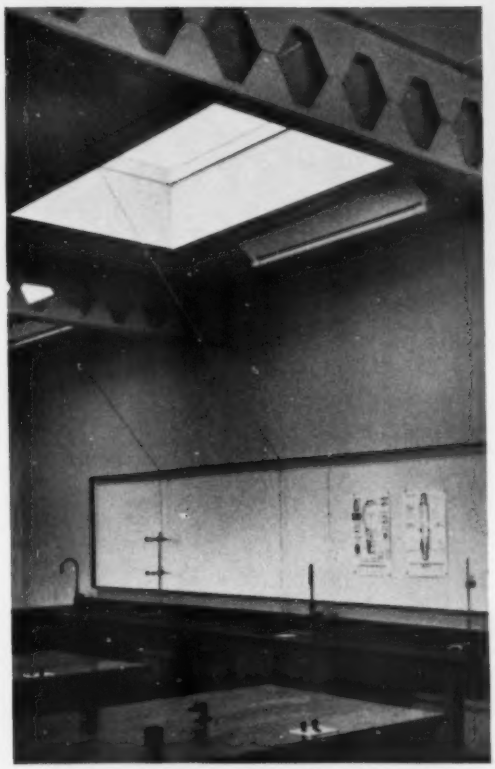

Domelights made from Opal 'Perspex' by Henry Hope and Sons Ltd., Smethwick, on the roof of Hadrian County Secondary Modern School built for the Borough of Wallsend Education Committee.
Architects: Messrs. Reavell & Cahill, F/F.R.I.B.A., Alnwick.
Contractors: Messrs. Alex Anderson (Contractors) Ltd., Newcastle-upon-Tyne.

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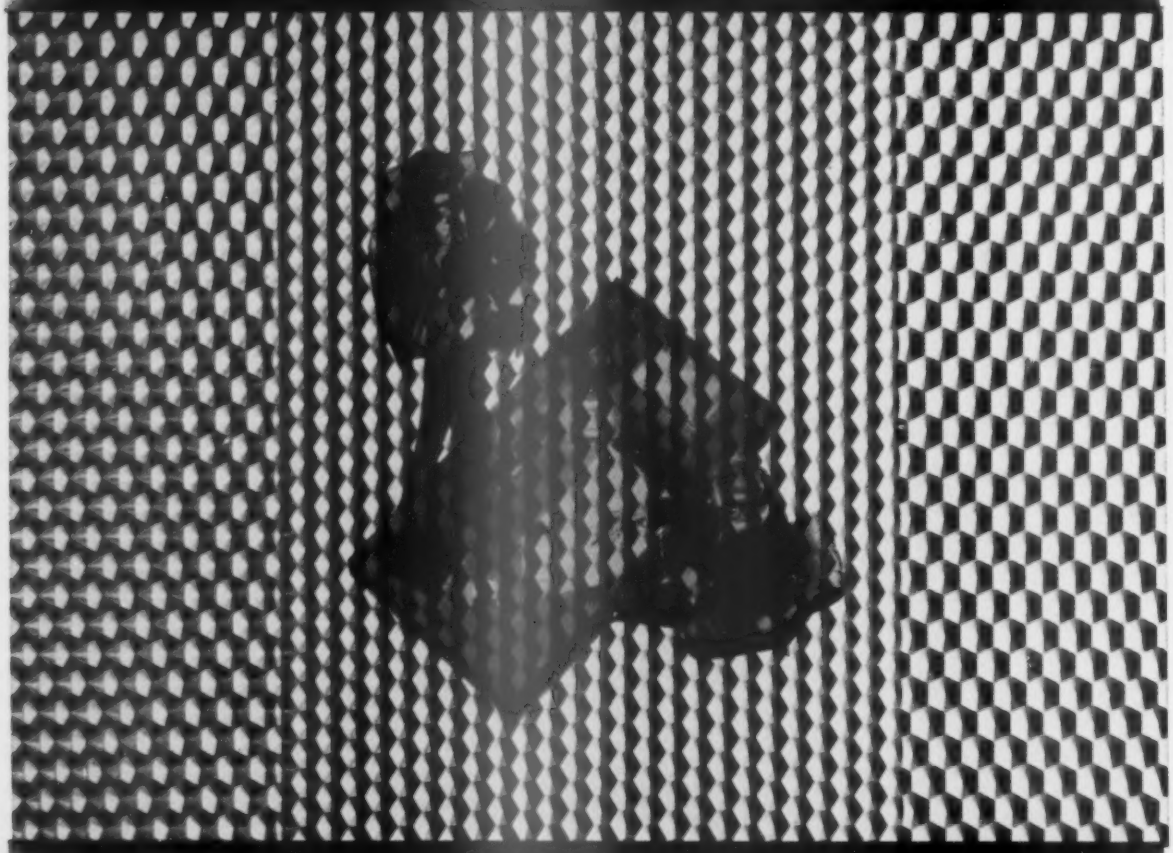

they might find themselves peering down through this while their progeny, the little lumens, become white with heat. For confinement to precise lines of conduct is enough to make any lumen glow.
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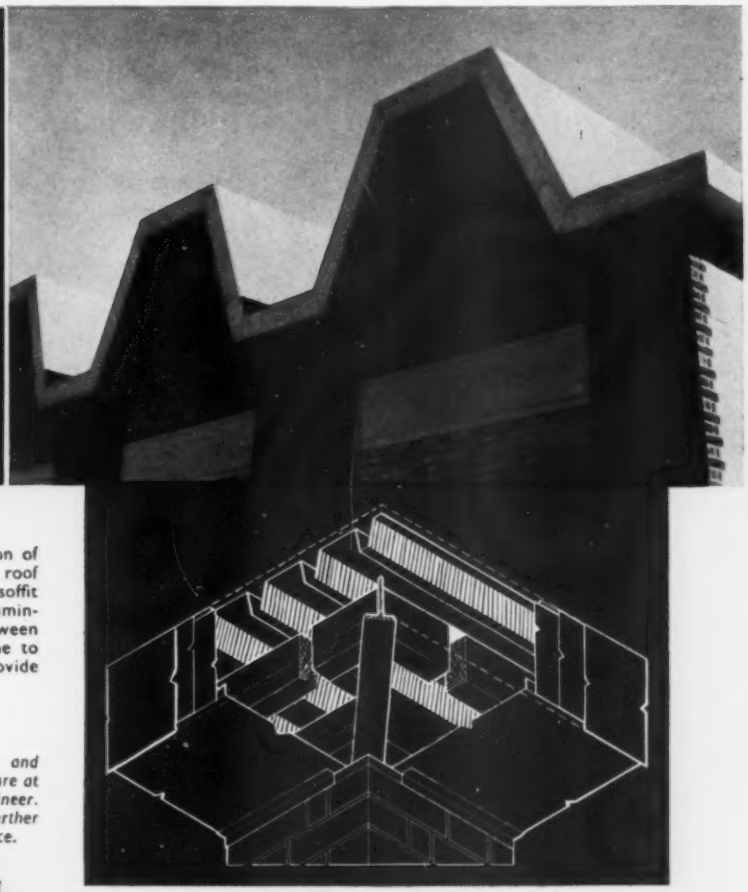

* This was achieved by the introduction of timber spacers below the oversailing roof deck units, to which the aluminium soffit was fixed, and the provision of an aluminium angle to bridge the gap between decking and soffit at the oversail line to waterproof the detail and to provide backing for the aluminium fascia.

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architects and their clients

Brasilia is an architectural act of faith unparalleled in modern times. In a little over three years it has grown from a sketch plan to the capital city of Brazil.

The fantastic speed of building has not prevented the realization of high standards of planning and architecture as the photographs in this issue show. How has it all been achieved?

There has, of course, like similar large-scale projects in the past, been a patron in the background with enormous resources at his disposal and the power and determination to use them to create a major national monument. But President Kubitschek is not a dictator in the way that Louis the Fourteenth was, and he could not have had his way without the support of the whole nation, who have poured a large part of their wealth into the new capital.

One of the reasons for this may be that architecture since the thirties has become a showpiece in Brazil. Glamour has resulted from a series of brilliant architectural experiments which have made architecture once more the Mistress Art. The public have fallen in love with it and everything has become possible. In short, it has meant that clients have been willing to order a building, giving the requirements which must be met and leaving the architect a free hand to get on with it.

The same kind of thing in some respects has been largely responsible for the success of the schools programme in this country since the war. The authors of a booklet* just published about the architectural work of the MoE say: "(the MoE) described their requirements in simple language in documents available to all, and then undertook not to think of anything else at the last moment". The MoE, it must be admitted, had a first-class team to help them formulate their requirements clearly; the most willing client may need help of a similar kind. One essential part of the architect's task, but not always recognized, is his need to identify himself with the client, to an extent that the client is able to make a positive contribution to the design and so that the essentials may stand out from a welter of issues, small and large. A few of the best domestic architects insist even on spending a weekend with their clients to see how the household "ticks".

Some of the best of recent buildings show signs of this hopeful marriage of architect and client; but it demands stout hearts.

On the Cover: model of the cathedral at Brasilia which is now under construction

*"Britain's New Schools" by D. H. Morrell and A. Pott. Longmans Green 2/6

The Architect and Building News, 3 August 1960

In the national interest

Following a public inquiry set up by the MoHLG, East Clandon Isolation Hospital, near Guildford, is to be converted into a detention centre for youths. The hospital stands in the green belt. Needless to say, there was much opposition to the scheme from local residents on the grounds of security, depreciation of adjoining property and the simple fact that the conversion will involve building additional houses and a new block to the existing building, all in the green belt.

I do not know the hospital, but unless it is very different from other buildings of its kind, it is no architectural gem. A few alterations to enable it to be used for a detention centre are not likely to affect the green belt very much. Twenty-six staff houses, on the other hand, very easily might. They might also set a dangerous precedent. The inspector who held the inquory appreciated this and although the houses are to be screened, their number is to be reduced. The probable damage to the green belt is, it would seem, very slight.

The important part of the decision, however, is contained in the following extract from the Ministry statement: "The inspector considered that the issue was whether or no the need for the centre was so much in the national interest as to over-ride the green belt policy. He was satisfied that the need was most urgent and the class of development so exceptional that it could be allowed without creating a precedent. He was also satisfied that it would be most difficult to find a suitable alternative place within or outside the green belt. Accordingly he recommended in favour of the proposal."

* * *

The words "in the national interest" are the key. If anything really is in the national interest then it must be done. But who has the meter, divining rod or magic tape-measure which enables this decision to be taken? "Not in the national interest" is a term often and conveniently used by Ministers usually to avoid giving answers to awkward questions. No one is likely to object to its use, because it carries, or at least used to carry in the old bow-and-arrow days, the suggestion that our rulers knew more about what was going on than we did. To say that things which apparently run contrary to established government policy as well as the wishes of the public, are "in the national interest" seems inconsistent. The East Clandon decision is probably right, but the talk about "in the national interest" should have been omitted.

Church design

Correspondence in *The Times* recently has dealt with church design from the point of view of the congregation. It has been rather woolly; tending to be the expression of personal whims about how worship should be conducted. Churches are, it is true, places for worship, but their traditional design is based on monastic practices which long ago disappeared from the Church of England. Modern church design has tended to break away from these traditions with, I think, for the most part unfortunate architectural results. I was under the impression that these changes were brought about by a desire to bring the altar nearer to the congregation both spiritually and in fact. On the whole, the correspondence has shown that there are plenty of people who do not like this and who only like the mysterious interior and the long vista, and the bad acoustics which so often go with them. They like a church "to feel like a church". A surprising number of correspondents seem by inference to pay more attention to the architectural setting than to the service.

Among the latest letters in *The Times* is one from Mr. Charles H. Gibbs-Smith, in which he quotes from the A. & B.N. and strongly criticizes Sir Basil Spence's design for Coventry Cathedral because the stained-glass windows will not be seen from the congregation. Sir Basil has made his reasons for this quite clear. He wishes to concentrate the congregation's attention on the altar and on the great tapestry. This idea seems to me to be traditional—for the altar will be a long way off, mysteriously lit by the hidden windows—and certainly very glorious, and at the same time a focal point for the whole congregation, thus binding together those who come for the service and those who come merely to see the architecture.

Forgotten lamp-posts

I can only think of one use for unlit street lamps. *The Times* recently struck a blow for freedom by starting inquiries that led to the lighting up of six large street lamps installed in the Broadway at Hemel Hempstead six months ago and never wired up. The town council, the development corporation and the Eastern Electricity Board all thought that it was up to someone else to complete the job. This sounds unimportant and silly, but if you have ever had anything to do with street lighting you will recognize the situation as only too familiar. The lamps should be alight by now.

The anti-dazzle screen on M1

On February 3, I criticized the ugly metal mesh anti-dazzle screen that had been put up on a stretch of the M1. I said, "This may prevent dazzle, but it quite spoils the road and

This 160ft high block of flats being built by Holland & Hannen and Cubitts to a design by A. B. Davies, chief architect-planner, at Basildon Town Centre, will be the tallest residential development in any of the new towns

is, in my opinion, aesthetically quite unacceptable. I think it is important that this criticism should be aired before the fence stretches the whole length of the road."

A letter from Mr. A. H. Mason was published on March 2 in which he ticked me off soundly, heavily and at length with references to the life-saving properties of the screen. I am pleased therefore to report a statement made in the House of Lords last week by Lord Chesham, Parliamentary Secretary, Ministry of Transport: "The studies which have so far been undertaken indicate that the experimental length of anti-dazzle fencing on the M1 gives satisfactory protection against glare from approaching headlights. There are, however, some accompanying disadvantages. For instance, because the screen encourages drivers not to dip their headlights, there is an increase in reflected dazzle from the headlights of following vehicles. It has been described as unsightly. In certain conditions it may help to form snowdrifts.

"It is, therefore, not yet established that in present traffic conditions the screen is a proper provision, and pending further experience of the experimental installation, the Minister does not propose to extend it."

Professor Furneaux Jordan

As announced last week, Robert Furneaux Jordan has been appointed Hoffman Wood Professor of Architecture at Leeds University for the session 1960-61. He will admirably occupy the chair and his lectures will be well worth hearing. The lectures given by past professors do not seem to have received much publicity.

By the time this appointment celebrates its jubilee, almost everyone eminent in the world of talking about architecture will be entitled to call himself professor.

The Gulbenkian Foundation

Grants made by the Calouste Gulbenkian Foundation to mark the fifth anniversary of the death of the founder amount to over half a million pounds. A very large number of organizations has been helped. More than £160,000 is payable in this country and the bulk of it goes to the arts, especially in the provinces. Architecture, unfortunately, is not mentioned, although one grant of £1,000 for theatre design is made "for meetings, travelling and other expenses of British, Continental and American producers, architects, etc."

Several grants have an indirect bearing on architecture, and of these £1,200 for an exhibition to be organized by the Society of Mural Painters, first at the V and A and afterwards on tour, is the most important. This exhibition will appear in October.

Among the grants made in Portugal there is provision for an architectural competition for a Cathedral at Braganza and a housing estate for old people in Lisbon.

This reminds me that we have not yet heard the results of the limited Portuguese competition for the headquarters' building for the Gulbenkian Foundation in Lisbon. The assessors include Sir Leslie Martin, and I understand that the designs were due to be submitted early this year.

All-male council

No doubt statistics exist from which the number of working women architects can be obtained. There must be quite a number, and some are well known. It seems odd, therefore, that there has never been a woman on the RIBA Council. It is high time that there was. I do not suggest that women architects should be represented as such, but that members of the RIBA should give better support to the occasional woman candidate who appears on the voting list. Even on RIBA committees one rarely meets a woman. This could quite easily be put right. I wonder that women architects are not more vociferous about it. Let's hear from them.

The traffic problem

Another of my forecasts, made on June 29, has come true. Mr. C. D. Buchanan, the Monico inquiry inspector, has been appointed to head a group at the Ministry of Transport. He is also to be the chairman of the new RIBA design and planning committee with Arthur Ling as his honorary secretary. This should mean business.

New LCC planning job

I see that the LCC has been advertising for a deputy to the senior planning officer. It wants someone with "exceptional imagination and drive". The job will entail taking responsibility for those aspects of the planning department's work which have a strong architectural content, including applications from public and private developers. The successful applicant will be deputy chief of a department 245 strong, excluding the clerical staff. The salary offered is good without being princely—£2,400 to £2,700.

Indefatigable CPRE

At their annual general meeting recently the CPRE discussed the strategy of their long-term rearguard action to defend the countryside. The latest threat is, of course, either the bursting of the green belt or what they felt would be just as disastrous—unplanned sprawl outside it.

Mr. Desmond Heap, past-president of the Town Planning Institute, who was the main speaker, said the countryside today was in a position of jeopardy the like of which had never been known, not even in the worst days of that corrosive smear called "ribbon development". "Everything seems to be, like June, busting out all over, because everybody is more mobile, wants more room for living, working and playing, and there is a good deal more of everybody."

He felt the only hope was to rebuild better and higher inside the existing conurbations and only allow development outside the green belt in the form of new or expanded towns.

All too true, but does the Government realise the urgency of the problem and is the Minister of Housing taking steps to speed up the expanded towns programme which is still lagging badly? How is he going to encourage developers to start on the twilight areas?

The CPRE have many other problems on their hands, as may be seen on page 134, where details of the programme for their annual conference, at Weymouth from October 13-15, are given.

Much interest will be centred on Dr. G. P. Wibberley's talk on agriculture and the spread of towns. Though increased efficiency has brought a rise in agricultural production despite a smaller acreage, can we afford to go on losing farmland at the present rate? Dr. Wibberley, whose excellent book on the subject, *Agriculture and Urban Growth*, was published recently, will no doubt enlighten us.

'Britains New Schools'

This is the title of a lively little pamphlet published by the British Council to accompany the British exhibit at the Milan Triennale.

It is crisply written by D. H. Morrell & Anthony Pott and puts in a nutshell the story of the post-war school building programme. The pamphlet is illustrated with photographs, diagrams and graphs which help to show very clearly how the problems were solved.

Three million school places at only half the 1949 cost per place in real terms is a wonderful achievement, considering the tight time schedule, and one of which all who have taken part in the programme can feel justly proud.

ABNER

RIBA wants a planning minister

A call for imaginative leadership and drive from the Government, including the establishment of a Minister of Planning, has been made in a statement on city rebuilding issued by the RIBA. Saying that while the profession could do with more skilled architect-planners and better town planning training in a "critical situation", the main need is for Government leadership, the statement continues:

Much rebuilding is already taking place, and at an increasing rate, in the centres of those prosperous towns and cities that attract the private developer. Such development, however, has so far been piecemeal, whereas comprehensive planned development is essential if local authorities are to provide the new roads, subways, pedestrian areas, upper level pavements, parks, playgrounds and all those features that add character and convenience to a city as a place to live in as well as to work.

In contrast to these prosperous central areas are those "inner ring" districts, as outmoded and ugly as they are inefficient and unprofitable, which must be rebuilt before long but which are allowed instead to decay because public authorities lack the money, and private developers the incentive, to renew them. These are the "twilight areas" between the centre and the outer suburbs that occur, not only in London (Battersea, Islington and so on), but also in the industrial north, the Midlands, Scotland and Wales, from which the population continues to move, when it can, to the South East in search of better conditions.

* * *

To meet this situation, the RIBA makes three proposals.

1. A Minister responsible for planning and co-ordination of development should be appointed. Town and country planning, for which there was a separate Ministry during and immediately after the War, has been relegated to a department within the Ministry of Housing and Local Government, which does not even carry the word "planning" in its title. The Minister is preoccupied with many other questions ranging from housing and rent control to local government and Welsh Affairs, yet the size of the planning problem at national, regional and local level requires full-time attention.

The new Minister (or other organization which the Government consider would meet the urgency of the situation) would take over the planning functions of the Ministry of Housing and Local Government, the distribution of industry (now controlled by the Board of Trade) and the integration of traffic planning with town and country planning on a national and regional basis. Such problems as urban congestion, green belts, the supply of building land and the continued drift of population to South-East England cannot be solved by the Ministry of Transport or the Ministry of Housing and Local Government working in isolation.

2. An expert committee should be appointed, charged with studying issues such as these: (a) the likely pattern, in a changing society, of present towns and cities as they could and should develop in the future, with particular regard to the future impact of motor traffic; (b) the financial problems of comprehensive redevelopment, whether by private or public enterprise, e.g. problems of site acquisition, compensation and betterment, "unremunerative" areas and amenities; (c) the procedural difficulties of local authorities in attempting to encourage comprehensive development, whether by private or public enterprise, e.g. the statutory time limit for planning consents regardless of the scale and character of the development, the limitations of C.D.A. procedure, the piecemeal nature of slum-clearance; (d) the co-ordination of present methods of allocating finance under unrelated headings such as road improvements, slum-clearance, housing, public utilities, parks and open spaces; (e) the best use of limited resources in technical personnel and how to co-ordinate their activities in county, district or government planning; (f) green belts; and the future demand for land for building and the supply available to meet it.

3. An urban renewal research and experimental unit should be established at once to obtain and study the data necessary for town and city reconstruction. This might also service the expert committee above, but it should be free of routine advisory responsibilities, and must be adequately staffed with a wide range of skills. The following are typical of many questions for study, in addition to the financial and procedural problems referred to above: (a) the present and projected movement of traffic, including pedestrians and the space they require, within urban areas; (b) the traffic generated by buildings of different kinds and uses; (c) alternative methods of car parking in central and residential areas; (d) new trends in shopping, e.g. the increase in supermarkets; (e) re-examination of plot ratios, daylighting standards and other planning techniques; (f) introduction of more residential accommodation into central areas and, conversely, of light industry and commerce into housing areas.

* * *

This research is needed immediately, for without a forward-looking traffic system, pedestrian and vehicular, there can be no comprehensive reconstruction on a new street pattern; and without a new street pattern many towns and cities must steadily suffocate.

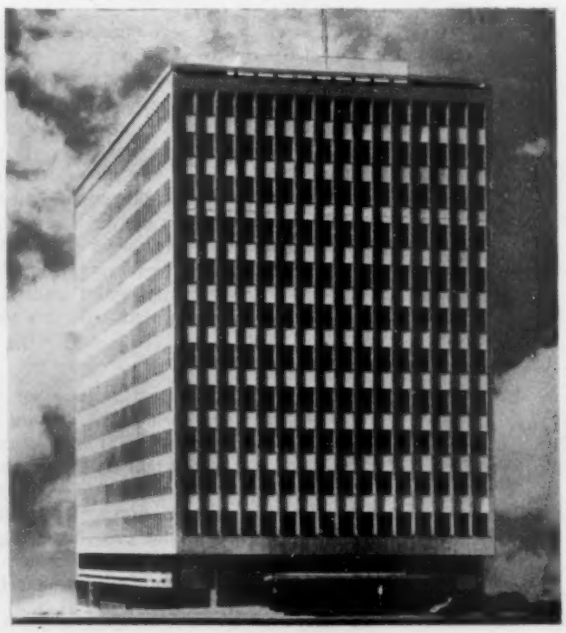
This unit, whether established departmentally, interdepartmentally or even on a consultant basis, should be encouraged, as part of its research, to initiate and carry through, in conjunction with selected local authorities, pilot schemes on an experimental basis. The "urban renewal research unit" established by the Ministry of Housing and Local Government (the constitution of which was referred to by the Minister in the House on July 12, 1960) is in no sense adequate to this task.

Surveyors' annual conference

Over 400 delegates and their wives will attend the Chartered Surveyors' annual conference, which is being held this year at the University College of North Wales, Bangor, from August 30 to September 3.

Highlights of the conference will be addresses by Sir John Wolfenden, C.B.E., and Mr. A. A. Part, C.B., M.B.E. Sir John, who is Vice-Chancellor of Reading University

A model of new offices for Stewarts and Lloyds Ltd. on the inner ring road, Birmingham, now being built at an estimated cost of £1m. Architects: Surman, Kelly and Surman



and an authority on education, will speak on *Educating the future citizen*, and Mr. Part, who is a Deputy Secretary at the Ministry of Education and responsible for the Further Education Branch, has chosen for his subject, *Education for the professions*.

These addresses will set the stage for the main part of the conference, which has as its theme *Education for the surveyor's profession*. Mr. Henry W. Wells, C.B.E., will introduce the report of the Special (Review of Educational Policy) Committee, and eight discussion groups will explore a number of important aspects of educational policy concerning the profession.

Other addresses will be given by Professor E. J. Roberts *(Improving a hill farm)*; Mr. R. C. Walmsley *(The Agricultural Division: Quo vadit?)*; Dr. R. J. Adie, of the Falkland Islands Dependencies Survey *(The geological history of Antarctica)* and by Professor E. J. Potts and Mr. K. Wardell *(The training of mining surveyors)*.

A discussion on *Practical training and post-graduate training for the quantity surveyor* will be opened by Mr. William James and Mr. E. Norman Harris, and Mr. Robert Steel, barrister-at-law, will launch a discussion on *The evolution of the chartered surveyor in British society*.

High blocks at Highgate

Details of the latest scheme in the decentralization programme of the Rodwell Group were given this week.

On a six-acre site at Highgate Hill, London, the firm are to provide a 17-storey office block, four other office blocks—one of 12 storeys, one of 10 and two of four—and three blocks of flats. There will also be a restaurant and dance hall, 50 shops in a precinct, and parking facilities for 450 cars, 400 underground and 50 at ground level *(see picture this page)*. Under the first phase of the scheme, the whole of which will take several years to complete, 145,000 sq ft of office space will be provided in three linked blocks, with access from high-level walkways above the shops.

The 17-storey office block will be built above Archway Underground Station.

Oscar Garry and Partners are the architects for the £4 million scheme, which is claimed to be the largest post-war comprehensive mixed development in London to be conceived entirely by private enterprise.

Mr. Sefton Myers, joint managing director of the Group, paid tribute to the co-operation of the LCC and said that the land needed for the first phase of the programme represented a value of £125,000 an acre.

Brighter post offices

The modernization of South Molton Street, Mayfair, Post Office which has just been completed marks the first stage in a £2½ million scheme to give a "new look" to post offices throughout the country during the next seven or eight years. Annual cost is estimated at £300,000.

Sir Hugh Casson and Professor Mischa Black, who modernized the Mayfair one, are also working on two others in London—at Knightsbridge and New Bridge Street. The modernization of three more in the North of England —Manchester Royal Exchange, Chapel Town Road branch office, Leeds, and the Corn Exchange branch office, Liverpool—is being undertaken by W. Stevenson, principal of Liverpool College of Art, and F. J. M. Ormrod, of a Liverpool firm of architects and planning consultants.

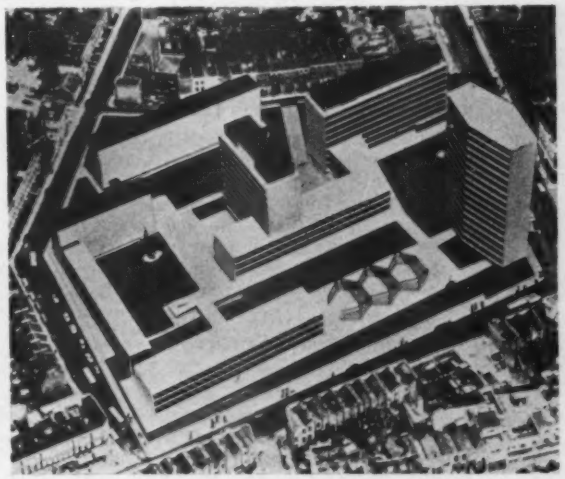
Architects in charge of the South Molton Street scheme were Alexander Gibson and Philip Lucey, with H. N. Barnes Ltd. as general contractors. Here the barrier grille, which Sir Hugh Casson feels is responsible for much of the institutional atmosphere of post offices, has been replaced by glass, and aluminium fittings have been installed. More slot machines have been fitted in order to keep down the queues. The dominant colour is grey, with contrasting dashes of post office scarlet. (*Further details in a later issue.*)

Civic design course at Edinburgh

A course in civic design which opens in October at the Department of Architecture of Edinburgh University is not only designed to meet all the requirements of the Town Planning Institute, but will concentrate on the urgent problems of urban renewal, with particular emphasis on the techniques of comprehensive development. For this purpose careful attention is being given to the integration of the various specialist studies which have to be provided in order that a complete understanding of the total planning procedure may be achieved.

Lectures on the *Theory and practice of civic design* will be given by Professor R. H. Matthew, C.B.E., Percy Johnson-Marshall and F. R. Stevenson, who combine extensive prac-

Continued overleaf



What is claimed to be London's largest post-war comprehensive development conceived by private enterprise is planned for Highgate Hill. Above, a model of the scheme and below, an artist's impression showing the covered walkways (story this page)

tical experience with up-to-date personal knowledge of recent urban development not only in Europe but in North and South America and Asia as well.

A short lecture course on the evolution of small settlements will be given in the History Series by Dr. P. J. Nuttgens, who has made a special study of this subject. The students will also have the benefit of the experience of the department's housing research unit, while visiting lecturers on this subject will include A. G. Ling, city architect and planning officer, Coventry, and L. H. Wilson, chief architect and planning officer, Cumbernauld New Town.

As one year of the course will be full-time, the opportunity will be taken of closely relating the lectures to the studio work and to the programme of planning research, and also of conducting a series of technical brains trusts, where several specialists will be available simultaneously.

Applications for admission should be made to the Professor of Architecture, the University of Edinburgh, 16 George Square, Edinburgh 8.

£45,000 for small plot in Leeds

One-twelfth of an acre of land, with a four-storey building on it, in the centre of Leeds, was sold recently for £45,000, equivalent to £540,000 an acre. This is well above the comparable figure for the plot in Luton which came into the news recently because of the high price it fetched.

The Leeds site is now used for shops and offices, but it is understood that the business man who bought it—he refused to give his name—intends to redevelop.

Study tour of South America

An architectural study tour of South America, including Brazil, Venezuela, Mexico and the United States is being organized under the auspices of the RIBA for late February and early March next year. It will last about three weeks and visits will be paid to Sao Paulo, Rio de Janeiro, Brasilia, Mexico City and New York, with optional extensions to Maracaibo and Miami. The party will be given opportunities of meeting architects in each of the places visited.

Cost of the tour, including accommodation and breakfast, will be in the region of £500, although this may be substantially reduced if demand warrants the chartering of an aircraft. The travel agents are prepared to offer special extended credit facilities over 12 months if required.

As it will probably be necessary to limit the party to 60, those interested are asked to write as soon as possible to The Secretary, U.K. Committee of the IUA, R.I.B.A, 66 Portland Place, London, W.1.

CPRE's annual conference

Agriculture and the spread of towns will be the subject of an address by Dr. G. P. Wibberley, Reader and Head of the Department of Agricultural Economics, Wye College (University of London), to the annual conference of the Council for the Preservation of Rural England, at Weymouth, which will last from October 13-15. Dr. Wibberley's recently published book on the subject has attracted wide interest.

R. L. Stirling, county planning officer of Lincoln, will give a talk on village planning and Professor J. A. Steers, Professor of Geography at Cambridge University, will speak on coastal preservation.

The programme also includes a visit to the atomic power station at Winfrith, where design problems will be described by officers of the Atomic Energy Authority.

Grants for 21 historic buildings

The Minister of Works has announced the award of grants to 21 historic buildings in England, Scotland and Wales, on the recommendation of the Historic Buildings Councils. They will be used towards the cost of repair and preservation of the buildings.

Although shorter than most previous lists, this contains an interesting variety of recipients, ranging from one of the greatest of English Elizabethan mansions—Burghley House, Northants, where some of the famous pictures are to be restored—to what is perhaps the only surviving example of a genuine falconry, at Farleigh Hungerford in Somerset.

Other interesting grants are made to the only working windmill left in Notts; a 15th-century tithe barn in Wiltshire; and the only building now standing in Blandford, Dorset, to survive the disastrous fire of 1731. The City of Winchester receives two grants for fine examples of period domestic architecture well-kown to the public. Two National Trust properties—a Gothic manor house in Devon and a late Elizabethan house in Somerset—are also included. An old Border castle in Northumberland and a former Augustinian priory in Berkshire, both now used as schools, are other recipients of grants. Abbot Hall at Kendal is the first building in Westmorland to be given a grant since the Act was passed in 1953. Every county in England is now represented.

In Wales a 16th-century cottage and a 17th-century farmhouse are given grants, and in Scotland additional assistance is given to two famous National Trust properties—Brodick Castle and Culzean Castle.

Since their formation in 1953 the councils have considered 3,317 applications for aid, and the number of buildings for which grants have been accepted totals 744, the aggregate value being in the region of £3 million. A condition attaching to every grant is that the public shall be given reasonable opportunity to view the buildings concerned.

Competition : two exhibition stands

The Scottish Gas Board (Glasgow and Western Division), has invited architects, designers, RIBA students and students in the final year at a school of architecture whose course is recognized for exemption from the RIBA final examination, to submit designs in competition for two stands to be erected at the Modern Homes Exhibition, Kelvin Hall, season 1960. One stand will exhibit various types of central heating and domestic hot-water installations, the other a comprehensive variety of domestic gas appliances.

Assessors: Professor Frank Fielden, M.A., F.R.I.B.A., Glasgow, and Jack Howe, F.R.I.B.A., F.S.I.A., London. Premiums: £150, £75, £50, will be paid for completion of drawings and supervision of erection of stands. Last day for submitting designs: August 30, 1960.

Conditions may be obtained from the Controller of Sales, The Scottish Gas Board (Glasgow and Western Division), 9 George Square, Glasgow, C.2.

diary

Architectural Hellenic Tour

September 9-25. Eastern Mediterranean tour including Greece, Turkey and the Greek Isles. Further information from Merlin Marshall, 416 Kings Road, Chelsea.

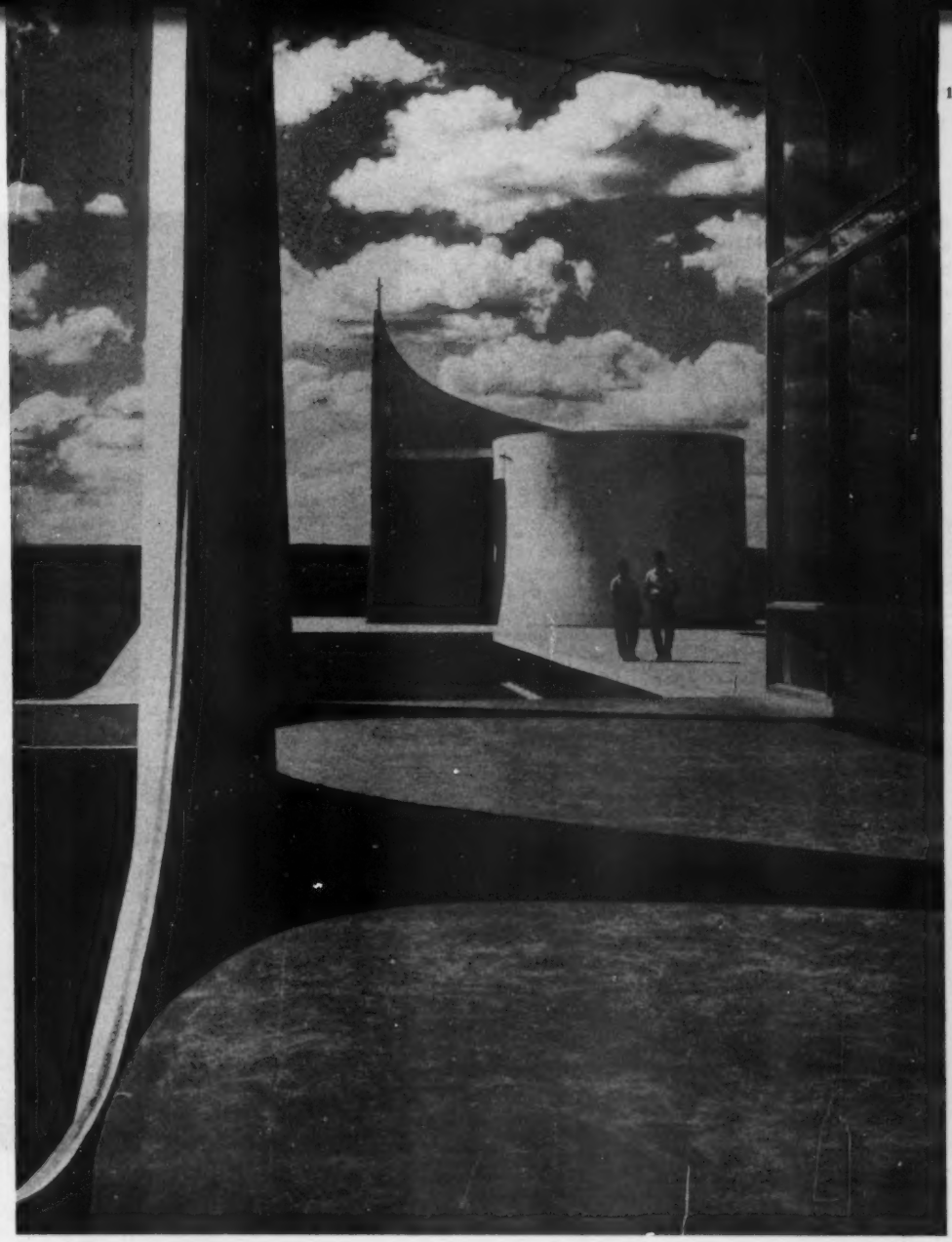
University of Edinburgh

Beginning in October, Course in Civic Design; Supervisor Mr. P. Johnson-Marshall.

Institute of Advanced Architectural Studies

Sept. 5-9. Course: "Modern Techniques in Concrete Construction", at the Institute, Micklegate, York.

Sept. 9-13. Conference: "The Architecture of New Theatres", at the Institute.



The President's private chapel seen beneath one of the finlike supports of his residence, the Palace of the Dawn, architect: Oscar Niemeyer. Below, Oscar Niemeyer (left) and town planner, Lucio Costa

BRASILIA

The new capital city of Brazil was occupied amid national rejoicing in April this year when President Kubitschek, his administrative staff, the government and civil service, took up residence there. It is the first national capital city ever to be designed and built in one enormous effort. An act of faith it has been called. The architect, Oscar Niemeyer, and town planner, Lucio Costa, were commissioned in 1957 *after the latter's design for the city plan had been selected by international competition, in which Sir William Holford, president of the R.I.B.A., was one of the assessors.*

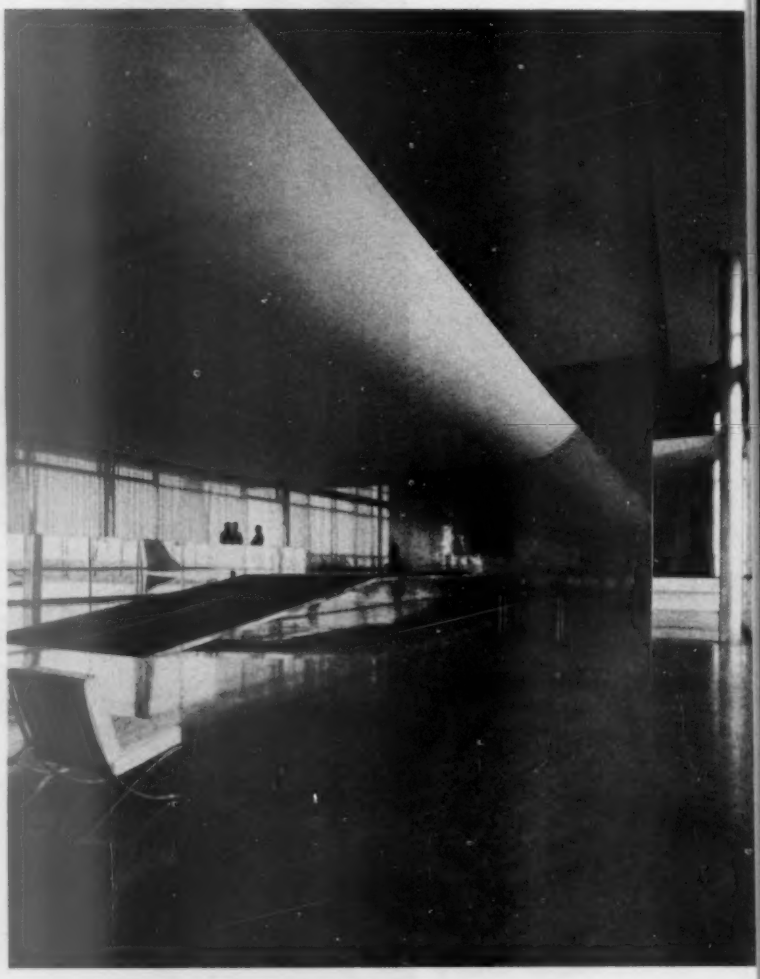
Brasilia

The Architect and Building News, 3 August 1960

A splendid new city, described by Andre Malraux as "the first capital of twentieth-century civilization", has arisen out of the red dirt and scrub on a 3,000ft high plateau in the heart of Brazil. What only three years ago was but a place on the map where three rivers met—the River Plate, the Amazon and the Sao Francisco—and where the cries of birds emphasized the silence and sense of isolation, has now become Brasilia, a bustling centre of modern life, with a population well on the way to the target figure of 500,000.

And, as the latest reports show, it is all going according to schedule. This will surprise those who know only of Lucio Costa's boldly conceived master plan, which Sir William Holford, president of the RIBA, has called "one of the significant documents of our age", and of the exciting architectural pattern devised by Oscar Niemeyer and his team. Such a plan and such a pattern, some will have concluded, could not be speedily carried out. They omitted to take account of the way in which the construction of Brasilia has captured the imagination of the Brazilian people, so that each and every one of them has put forth the last ounce of effort to see that the plan and the pattern become a reality—and on time.

The speed and skill with which the work was being done obviously surprised Sir William Holford, who wrote after touring the area: "To anyone like myself, who has spent many years in making plans for the improvement of cities, and also for new small towns, only to have them postponed and modified by a whole series of committees and tribunals and eventually put into execution in parts only, the



The entrance hall of the Palace of the Dawn showing the ramp exit

A small chapel in the residential area

experience of seeing the pilot plan of Brasilia actually transferred to the ground and developed in three dimensions within the short space of two to three years, is absolutely electrifying. Nowhere in the United States or in the countries of Western Europe could such a programme have been carried out so quickly—except in time of war.

"The momentum achieved will launch the new city faster than I had anticipated. I was doubtful in 1957 whether the new city and its federal district would grow to the dimensions planned for it. Now in 1959, my doubts are all in the other direction—the population may grow too fast for the plan."

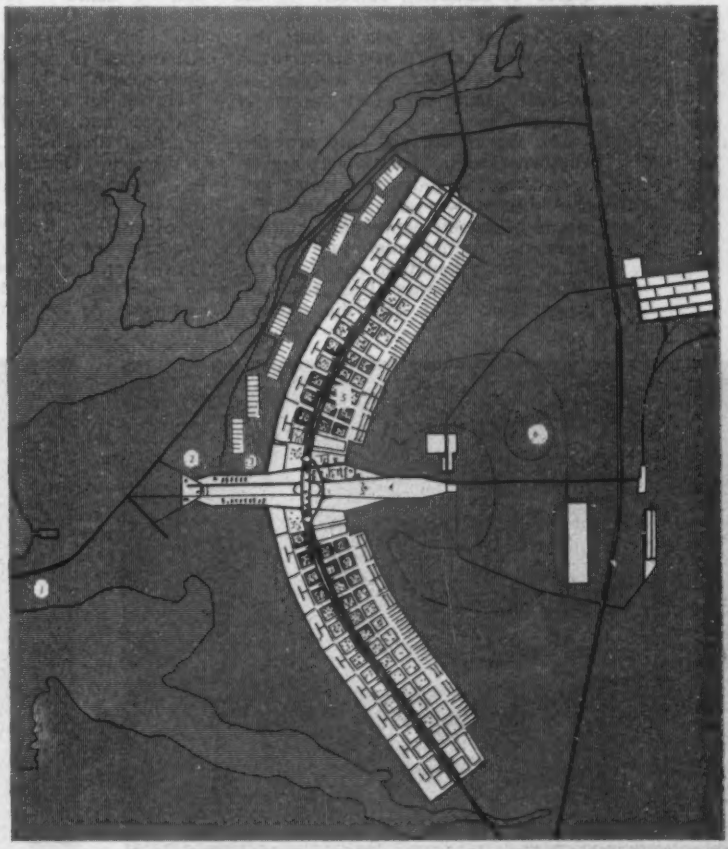
The construction of Brasilia was effectively begun in the first six months of 1957. Now the international airport has been completed, streets and avenues, viaducts and bridges have been built, as well as a radio station; water, light and power have been laid on and enough telephones installed to meet demands at this stage of development.

First building to be open to the public was the Brasilia Palace Hotel, with its 180 apartments, and this has been operating effectively for more than a year. The Palace of the Dawn was inaugurated in June, 1958, since when many official ceremonies have been performed in the spacious conference hall.

* * *

Why was a new capital needed and why was it decided to site it here? In the first place Brazil occupies an immense area and the present capital, Rio de Janeiro, is not situated in a position where it can provide a focal point for all the diverse activities of

The diagram below of the city shows how the residential belt 5, is broken at its centre by another long thin zone at right angles to it containing the ministries 3, Plaza of the Three Powers 2, cathedral, recreational and cultural buildings 4, and stadium 6. The Plaza of the Three Powers 2, is shown in more detail on page 145. The President's palace 1, is outside the city



Palace of the Dawn with the President's private chapel in the left foreground. Details of the palace are shown overleaf

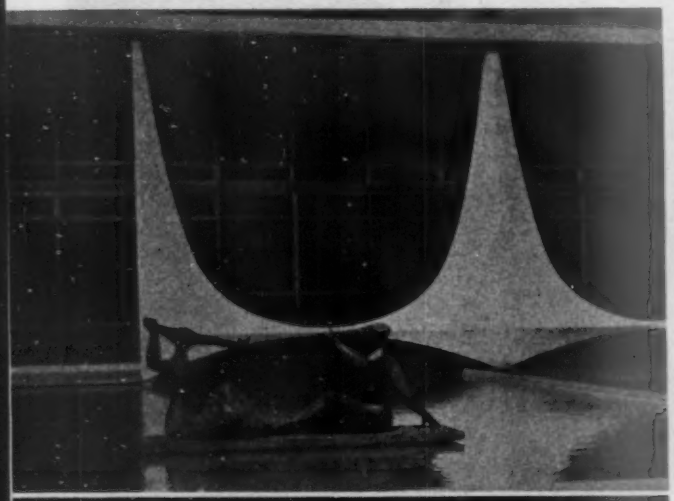
this vast territory. In terms of settlement, it has been stated, Brazil is in a semi-colonial stage, and the unbalanced distribution of wealth, social and political forces, of population and degree of education account for the many ills which have hampered its development. It was felt, in short, that the country needed a new centre which would more adequately express its natural aspirations and spirit of independence.

The site chosen not only provided suitable climatic conditions, vegetation, communications and water supplies, but it was also selected as a means of counteracting the southern trend of internal migration and to deflect the population centre to the under-populated west. This area comprises more than half the nation's territory, but it was almost devoid of people.

Though the need to transfer the seat of government nearer the centre of the country was proclaimed more than half a century ago—in the first Republican Constitution (1891)—it was left to president Juscelino Kubitschek to set the machinery in motion on April 30, 1956.

He set up a Town Planning Corporation and invited the celebrated Brazilian architect, Oscar Niemeyer, to direct the Department of Architecture, which meant drawing up projects for the Residential Palace of the President of the Republic—to be called "Palacio do Alvorada" (Palace of Dawn)—and other works planned to be situated outside the urban perimeter. At the same time, a com-

The President's palace. The sculptures stand in the pool in front of the palace. They are the work of Ceschiatti



petition for the pilot plan for Brasilia was organized. Architects from the United States, France and England (Sir William Holford) were on the judging committee. Architect Lucio Costa's plan was chosen out of 26 submitted.

Costa described his aims thus: "the first condition was for the town planner to be imbued with a certain dignity and purity of intention, for from this fundamental attitude derive the sense of proportion and that of suitability and measure capable of endowing the project as a whole with that monumental character which is to be desired; monumental not in the sense of ostentation, but with the idea of expressing palpably, as it were consciously, that which is worth-while and significant. A city planned, indeed, for orderly and efficient work, but at the same time a living city, pleasant, suitable for creative meditation and intellectual speculation, and capable of becoming in time, not only a centre of government and administration, but also one of the most lucid and sensitive poles of cultural attraction in the country."

Aline B. Saarinen said the plan was shaped like a giant dragon fly. Its spine was the pilot axis along which were cultural, recreational, business and civic buildings. Its triangular head, containing the monumental buildings of the three federal powers (executive, legislative, judiciary) thrust out, forever free from encroachment, above a man-made lake of 16 square miles and commanded a vast vista.

The windswept wings made the

Left, the foyer between the chapel and the main entrance foyer. It serves some of the offices. The sculpture is by A. Bloc. Below, reception desk in the entrance foyer. Bottom right, the council room

The shape of this building is a long rectangle. It has a flat roof that projects on both the long sides of the plan. The main entrance is slightly off centre. The covered entrance is beneath the bridge which connects the palace with the chapel. A road runs beneath this bridge

The small chapel in reinforced concrete attached to the Palace of the Dawn, the private residence of the President. The view on the left shows the altar, candelabra and kneeling stools. The small picture below shows more candelabra and the simple baptismal font

secondary axis (and the crossing of the two axes was the heart of the city) for the residential areas, which were self-contained super-blocks of housing, shopping, schools, chapels and so on. The huge vertebrate contained—like a bloodstream—a logical highway system that linked all its parts. Super-highways, secondary roads, pedestrian walks, underpasses, 400ft wide boulevards—all expressing a circulation system based on recognition of and respect for the automobile.

This plan, Saarinen continued, went far beyond the requirements of sociology and statistics that were too often the sole concern of city planners. It created a grandeur of space and scale and proportion and formal, orderly coherence that had been lost since the proud "grand plans" of the past. "This is Costa's focus and emphasis. Here are the monumentality, dignity and fitness sadly absent from modern city planning."

In a testimony on his work at Brasilia, Oscar Niemeyer confesses that it gave him a completely new approach to architecture. "I was accustomed to view Brazilian architecture with a certain reserve," he wrote. "I believed, as I still do, that unless there is a just distribution of wealth—which can reach all sections of the populace—the basic objective of architecture, that is, its social ballast, would be sacrificed, and our role of architect relegated only to wait upon the whims of the wealthy.

"This left me with a vague restraint, which led me to believe that such as dedicated themselves to architecture body and soul must be very naïve. Although I had never been uninterested in our profession, I looked upon architecture as the complement of more important things, more directly connected with the life and happiness of man."

However, he had found a new satisfaction in his work at Brasilia, which had altered this conception. "I am accompanying this work with the greatest zeal, as I am convinced it has major importance. I am desirous that the whole be transformed into something lasting and useful, something which will evoke feeling and beauty."

In the Palacio do Alvorada, he said he had tried to find a departure which did not limit itself to the construction of an important residence, but rather to that of a true palace, imbued with the spirit of monumentality and nobility it called for. With this in mind, he gave the structure lightness and dignity, as if it had landed softly on the ground. To achieve this, the columns tapered at the ends, allowing the layers a thickness of 6in in the shaft between spans, which established perfect integrity of form.

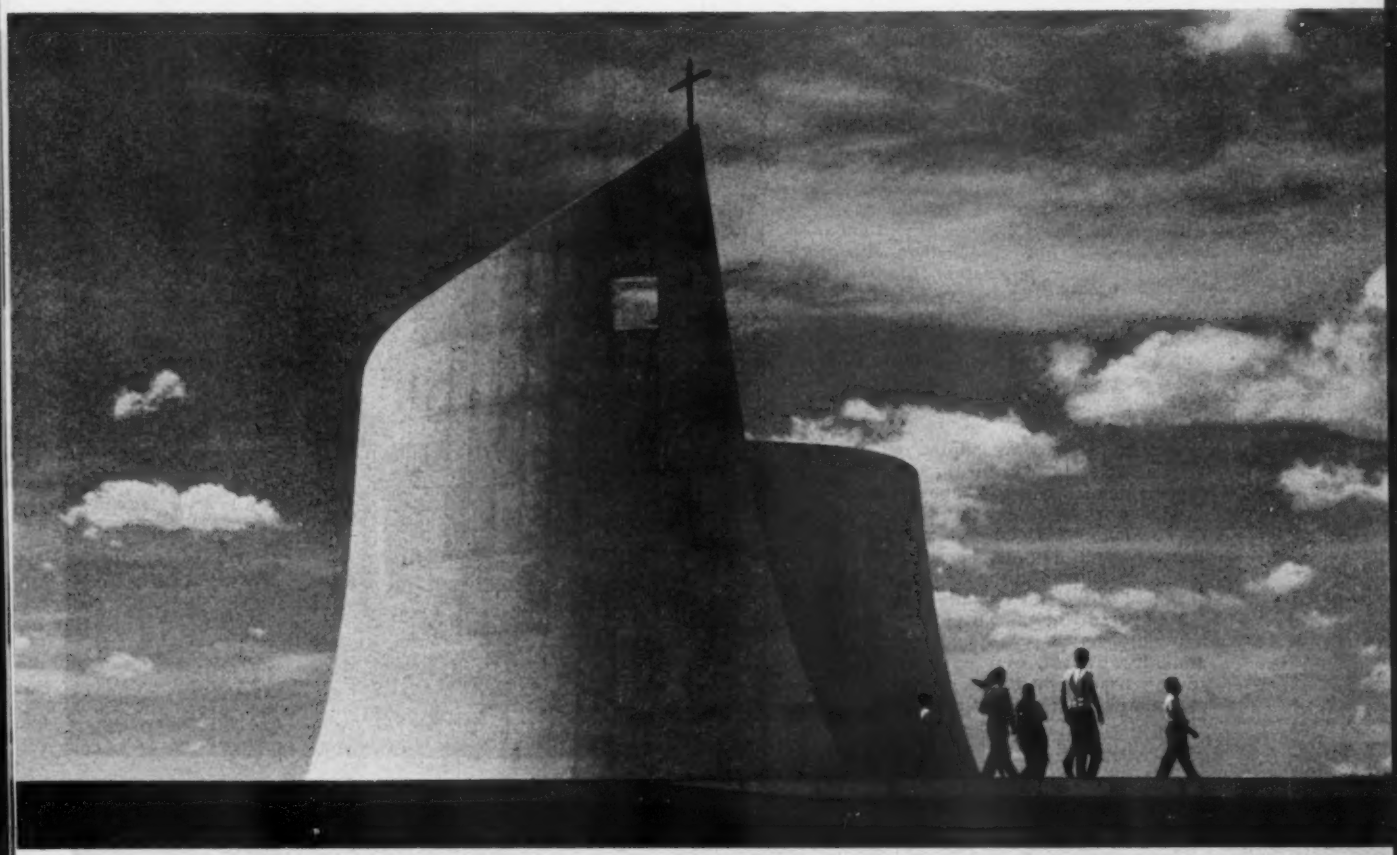
With the National Congress building, an immense esplanade, in marked contrast to the two administrative blocks, marked the horizontal line of the composition, whereon the two plenaries stood out. These, with the other elements, created that play of forms and shapes which made architecture what it was and which Le Corbusier so well defined as "the wise, correct and magnificent play of volumes of light".

In the Praca dos Tres Poderes (Piazza of the Three Powers) unity had been his principal concern, for which he conceived a structural element which formed a common denominator for the two buildings—the Palacio do Planalto (Tableland Palace) and the Palacio do Supremo Tribunal (Supreme Court Palace)—which permitted the sense of sobriety of the great squares in Europe within the scale of values demanded by Lucio Costa's magnificent project.

* * *

An architect who went with a party of 32 on a tour of Brazil, Venezuela and Mexico contributes some notes about the trip. . . .

Now to Brazil. First, it is bigger than the U.S.A. The population was originally Portuguese and imported Negro, although there are now minorities of almost every European country. There are Indians in the Amazon



basin, but there were none in the district in which we were. Therefore, in effect no natives.

There is no great building tradition —Portuguese Baroque exists in a minority, but has no direct application to today. A variety of countries contribute to such national characteristics as exist, but none seem to have a great tradition for craftsmanship.

General education is not yet extensive and the middle class is only now developing. Conditions, therefore, are similar to our 18th century, with the few exercising considerable influence over the many. These few are essentially modern in outlook, and although some are governed by mere finance, others have a genuine dedication to good taste following again the pattern of the 18th century in this country.

There is no hankering for the antique and the ordinary people have insufficient money to be vulgar. There are, therefore, no Blackpools or gaudy main street furniture shops. The high-class shops (particularly those selling furniture) show a good presentation with reasonably good materials, but may be next door to a tasteless café.

The modern architectural movement, as it exists in Brazil, is a fine thing, and the architects are still sufficiently few for an architect-designed building to be generally better than one designed by a non-architect, but the proportion is still low.

Architects become fashionable, therefore there may be a long waiting list to have buildings designed, and Niemeyer, before he gave up all private work to concentrate on Brasilia, was reputed to have 72 buildings on his waiting list. The architects have small staffs and concentrate on overall design and control of special relationships. Much of the work showed evidence of lack of good detailing.

There is much "big" thinking with a complete lack of economy. The hot climate calls for special planning, larger headrooms, etc., but schools and universities might have twice as much circulation as teaching space, which seemed excessive, and consequently programmes get cut and schools do not get built.

The sight of an unfinished building is not uncommon. There are two reasons for this. In the case of a private enterprise building it will, no doubt, arise from shortage of money, and it is not uncommon to erect a building in stops and starts as and when shares are taken up and the money becomes available. In the case of public buildings, stoppages may result from political pressures or from priorities, as, for example, that at present being given to Brasilia at the expense of all other public building in the country.

In the designs, it appeared generally that the structure was made to obey the architectural requirements. Sometimes heavy demands in costs were made to achieve a desired effect, such as a flat soffit, large spans or exciting ramps and stairs in which the reinforcement must be heavy. Often great skill was shown with tapering slabs, which concealed the apparent weight of the structure and this will be evident in the photographs of Brasilia.

Concrete is used almost universally and there are very few steel-framed buildings. In one case, however, the steel stanchions in a 30-storey building were not cased for fire protection. Concrete was invariably covered up externally with mosaic or marble. In all structures, wind bracing and stiffening for stability were not often apparent.

Transport and the motor car has an unusual effect on building for, although there is plenty of land available, there is still an incentive to achieve a high density of development and to build high. This arises directly from the difficulties of communication as there are poor public transport systems and import costs make motor cars very expensive. It is necessary, therefore, to concentrate all the workers near their offices or factories, so as to cut down the need for travelling.

The outstanding thing about Brazil is its complete solution of the colour question and there is now a perfectly

satisfactory integration of black and white. There was no Latin flamboyancy and it is, for example, considered bad taste to wear a too brightly coloured tie in the cities. No one would think of walking in the street without a jacket, and tropical suits were dark in colour.

One tends to forget the size of the cities and the rate of growth. Sao Paulo is the fastest growing city in the world and is now larger than Rio, each having a population of four million people, each bigger than Chicago. Belo Horizonte, which was planned as a new city some 60 years ago and about which nobody seems to have heard, now has a population of 600,000.

Brasilia.—I had not appreciated its considerable scale. From tip to tip of the residential wings is about seven miles—or roughly the distance from Culverhouse Cross to the top of Rumney Hill. I think we should remember the main purpose of the construction of the new capital—and here I quote from the official Government handout—that it is "to achieve unity, administrative efficiency, economic and social development of the interior and exploitation of the huge deserted but fertile areas that lie inland.

"It is true that the country has many problems, some equally urgent, such as those concerned with knowledge, transportation, food, foreign trade, inflation, political instability, education, communism and the unbalanced distribution of wealth and culture. The

Workers' houses in the residential area. Note the planting; also the slatted effect of the sun blinds in the large areas of glazing. The target figure for the population of Brazilia is 500,000 people

new capital will not be a cure-all, but it will be a site where an efficient administration can better devote itself to the task of solving these problems."

Although initially the city is going to be a Government centre, housed almost entirely by civil servants, there is provision in the plan for a small amount of industry, and it is intended that satellite industrial centres will ultimately be built nearby. When one asks about costs, there is no answer. Sir William Holford asked Dr. Pinheiro, the president of Novocap (the new town corporation) whether he was bothered by accountants over capital expenditure or by accounts and things of that kind. He said: "No, no, no". I said: "Do tell me the secret—how is it that you survive"? He said: "It is quite simple—we have fixed a D-day, April 21, 1960. The town must be ready by then. I have said to Parliament: 'If you criticize me, you do not get your town'."

I have, however, heard a figure mentioned of £2 million for the Palace building, and this is probably not the whole story. But it is a lot of money to spend on a single building of this size.

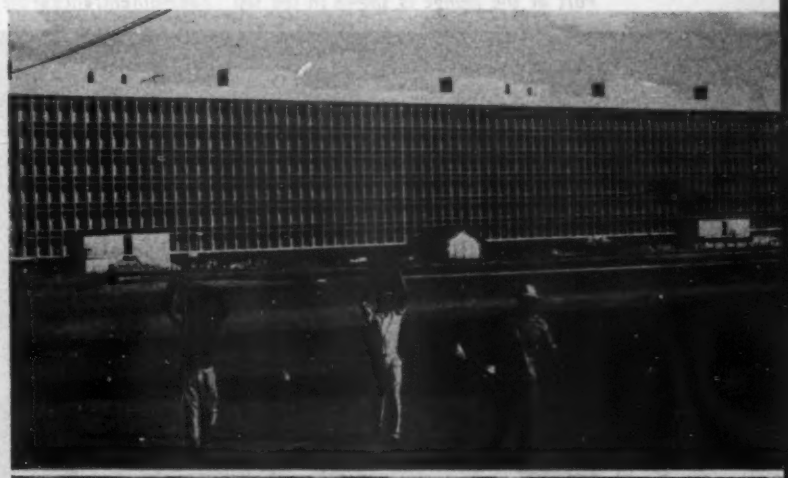
Although there may not be the responsibility to cost control to which we have become accustomed, we must admire the dedication of the architect, Oscar Niemeyer, and the surprisingly small team who are working with him.

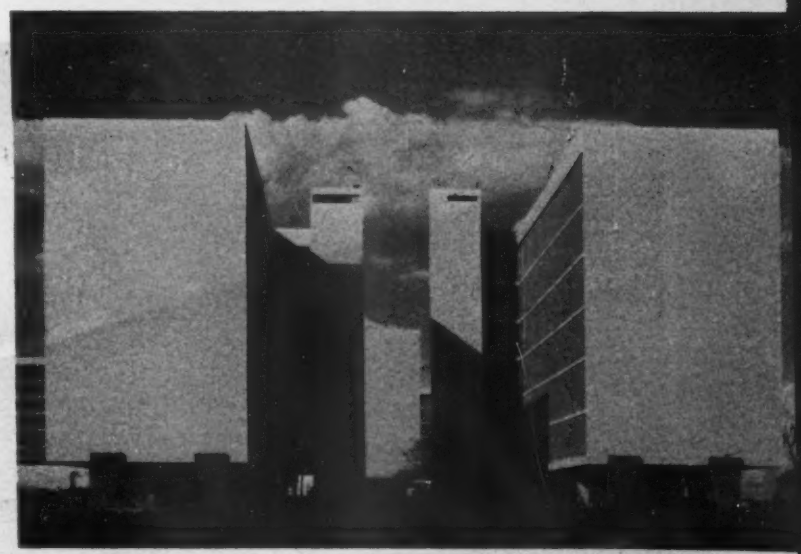
There was much work to be done before D-day in April. It had become a matter of political importance to transfer the Government on that date for President Kubitschec's term of office ends soon and he has been the driving force behind the whole scheme. If it were not in use, it is conceivable that his successor might write off all the work which has been done already.

There is, therefore, a great enthusiasm (mingling, no doubt, among some of the contractors, with the strong commercial advantage of a military operation) to get the work done on time and this goes on round the clock, 24 hours a day. The new city is a tremendous act of faith.

The president's palace is complete and occupied and the walls are well hung with works of art by the best of today's painters. Only one British painter is represented, but his works are so numerous that they are obviously a personal choice of the president. The artist is John Piper.

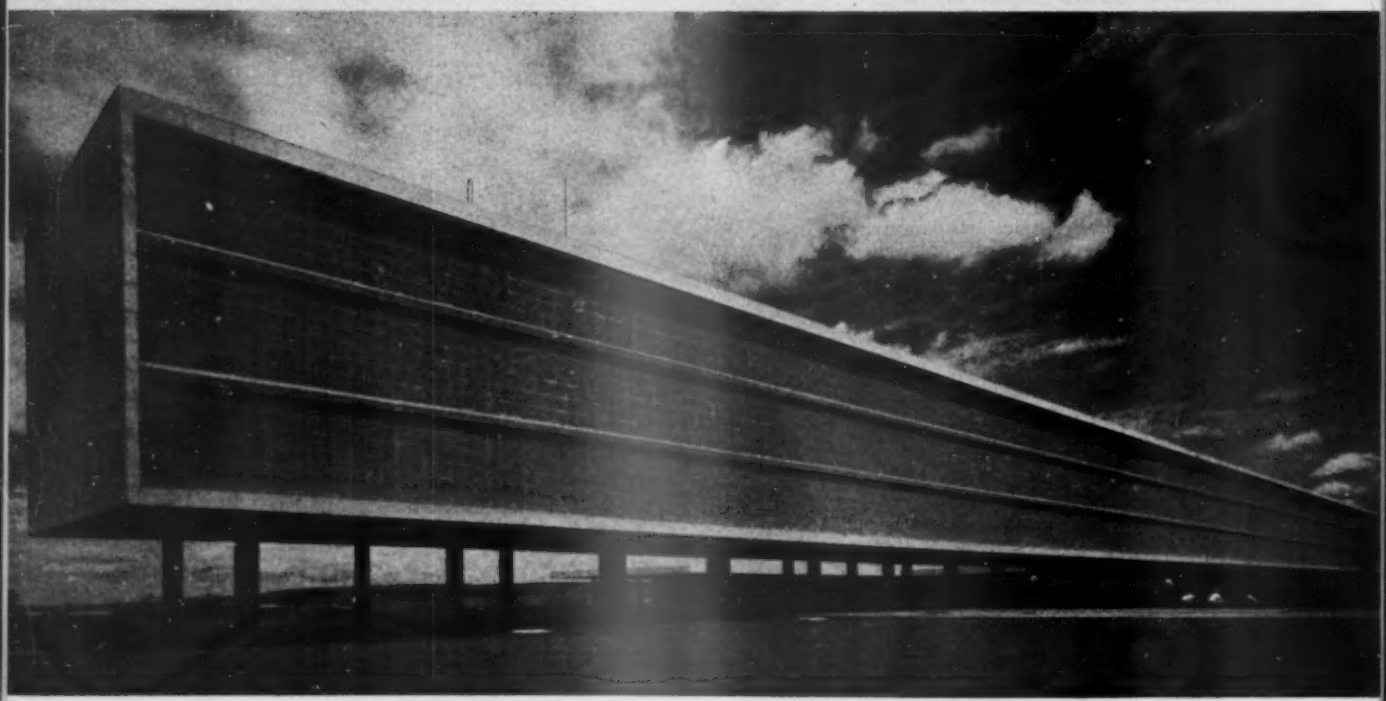
In talking about the architecture, one must not forget the vast scale of civil engineering works which are considerable and most exciting. The lake is an artificial one, and all the public services have had to be provided from scratch. The road system is extensive and, although one cannot at the moment envisage traffic jams in such an open development, the motor car is well catered for (indeed it will be essential to get from building to building) and at the Town centre passes at three levels are already under construction.



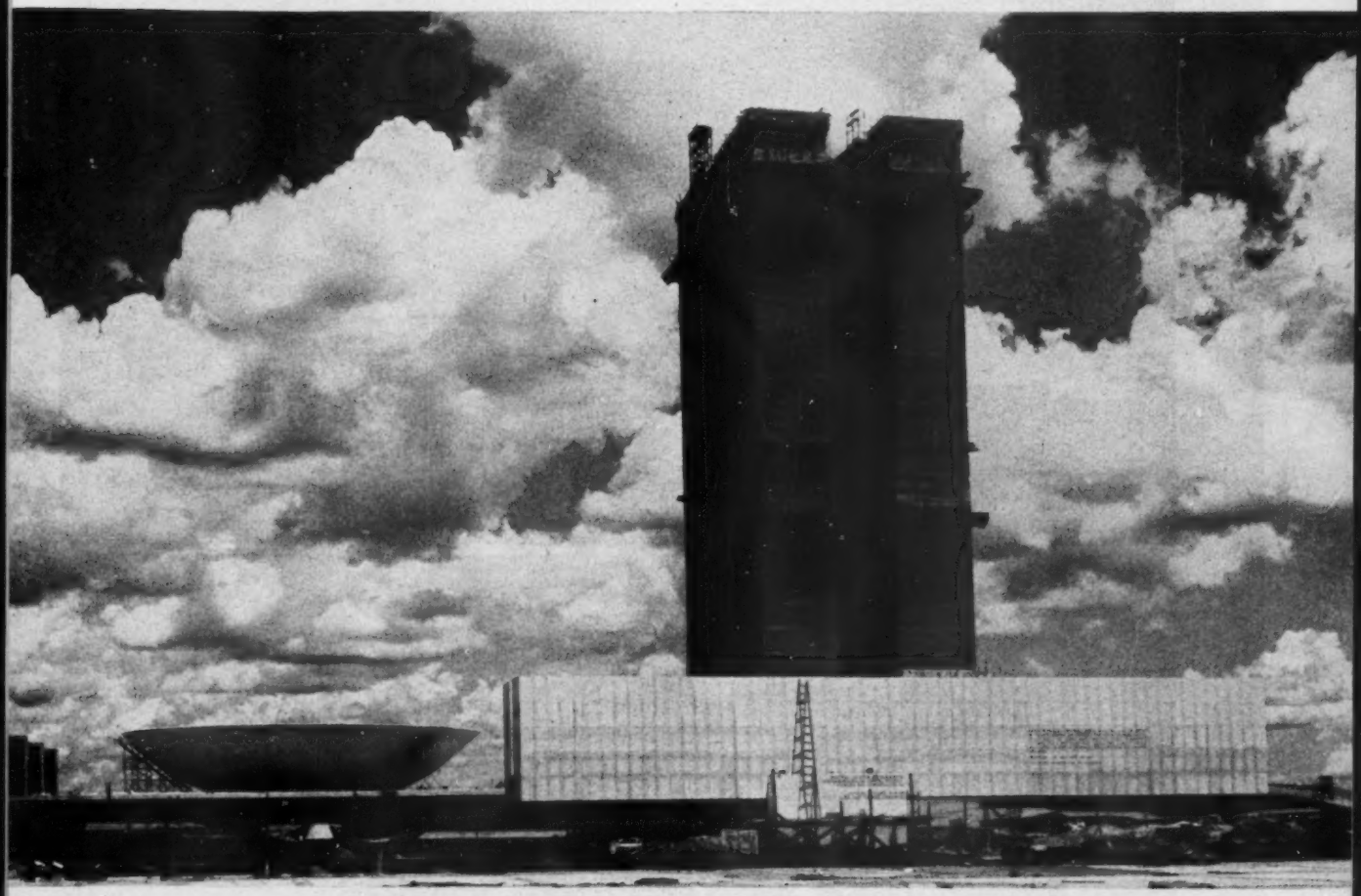


Views of the apartment blocks in the residential area. The super blocks of housing in the residential area provide dwellings, shopping, schools, chapels and so on

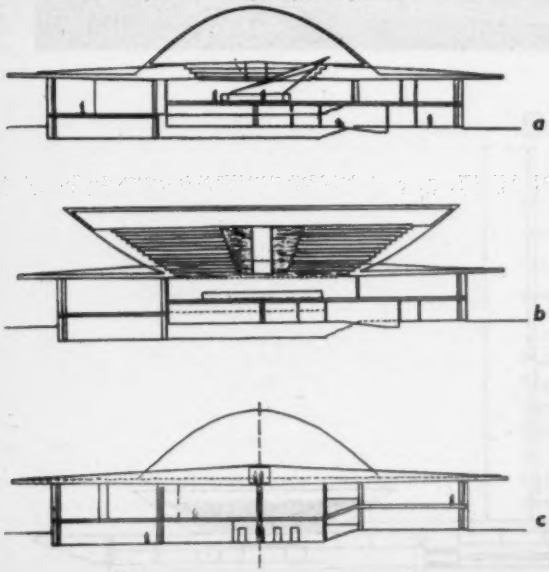
The Brasilia Palace Hotel, which has 180 apartments and spacious public rooms. Part of the lounge is shown in the top picture. In the right hand corner is the beginning of a vast mural by Athos Bulcão. The main entrance of the hotel is arranged to permit separation of arriving guests from those using the restaurant and other public rooms

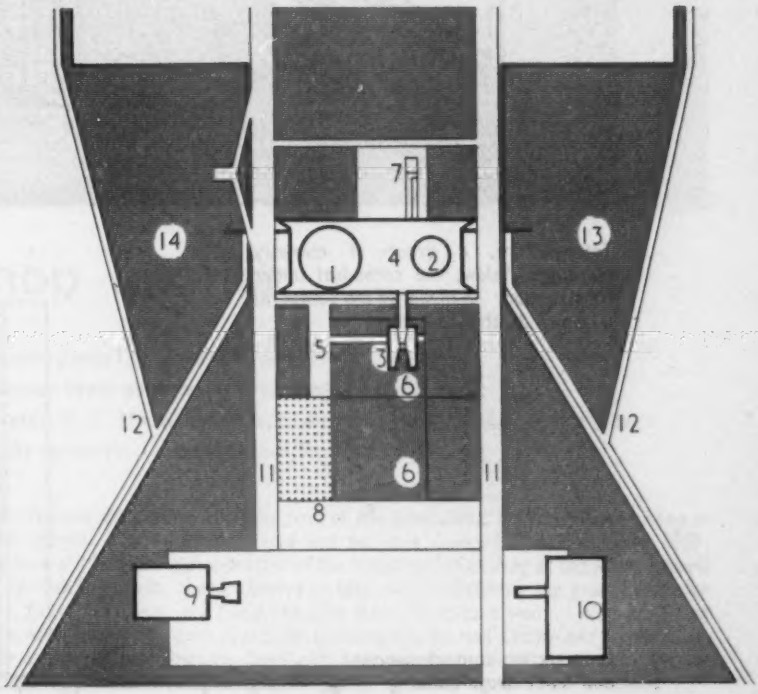


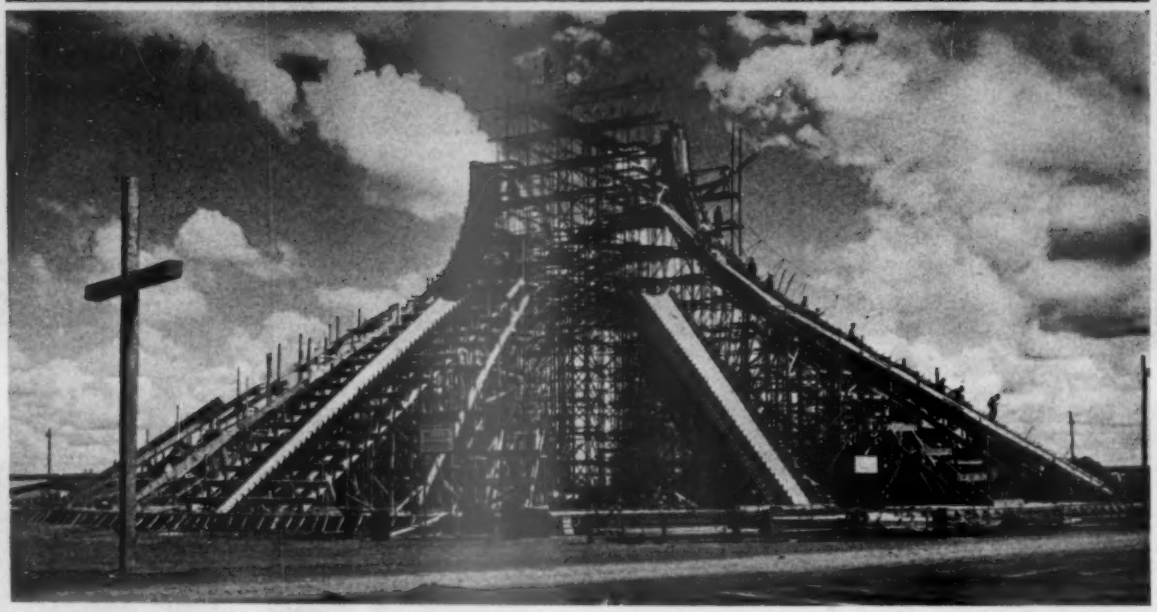
Part of the Three Power Square, the plan of which is shown at the foot of the page. The city museum is in the foreground, the lower house of parliament on the left: the point block will house the congress administrative services. Below, cross sections through (a) senate house, (b) lower house (c) pedestrian promenade between senate and the lower house



KEY: Three Power Square
1. Plenary of the lower house. 2. Plenary of the senate. 3. Administrative blocks. 4. Promenade. 5. Garaging space. 6. Lake. 7. Gradient. 8. Forum of imperial palms. 9. Supreme federal tribunal. 10. Palace of the tableland. 11. Avenues. 12. Service ways. 13. Space for deputies. 14. Space for the public.

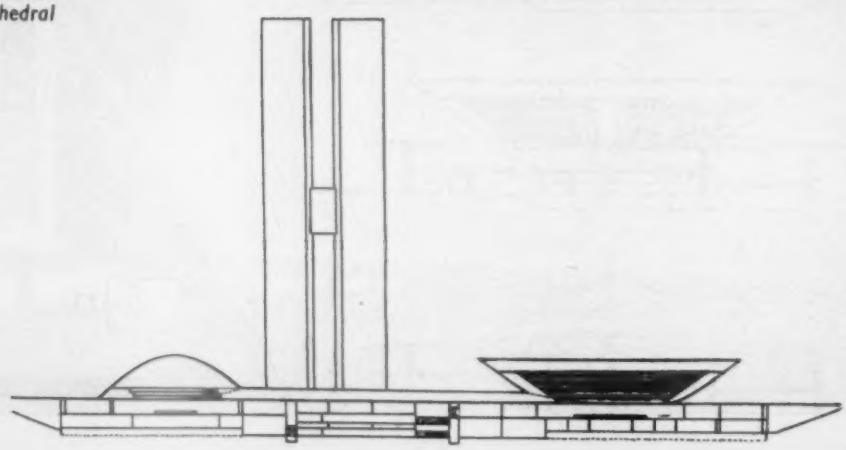






Top picture, a group of ministry buildings, below, the cathedral under construction. A model of the cathedral is shown on the front cover

Long section through senate and lower house building

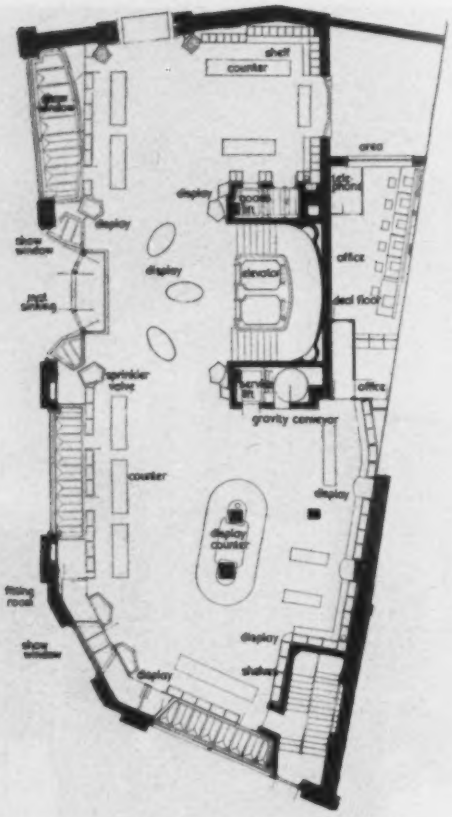


As you enter the main entrance of the shop from Regent Street you see this screen wall to left. The design, in cement fondu, is by Eric Peskett. The screen wall is removable and masks fire doors which close the openings between the two parts of the ground floor shop. *See plan on page 148*

shop interior

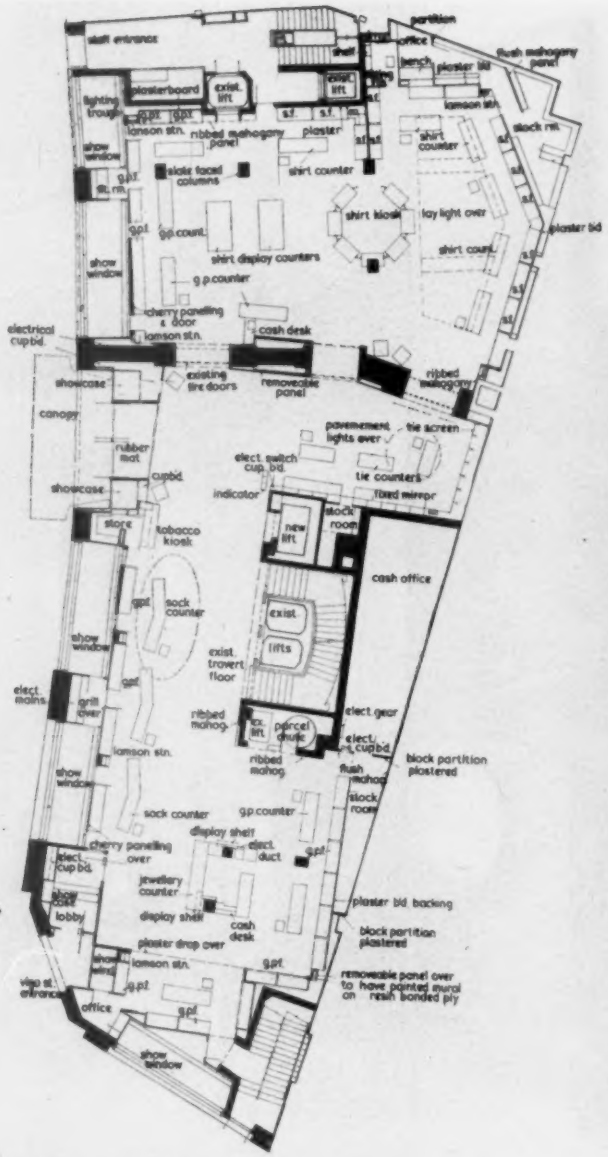
for Austin Reeds Ltd., Regent Street, W.1
architects: Bryan and Norman Westwood and Partners
assistants: P. C. Hoppenbrouwers, E. de Pierro, R. D. Stokes, J. S. Collins
quantity surveyors: Cyril Sweett and Partners

In this feature we publish the first part of the alterations to Austin Reed's shop in Regent Street. The works, carried out between June 1958 and October 1959, include new lifts from top to bottom of the building, refixturing of the lower ground floor for leather goods, shoes, theatre tickets, etc.; refixturing the ground floor for shirts, ties, underwear, etc.; and the first floor for leisure wear. New staff and public lavatories, new stock rooms for tailoring (in the roof space) and remodelling of the existing main staircase have also been completed with new enclosures for the existing lifts. The whole of the lighting and heating has been renewed



GROUND FLOOR AS EXISTED

NEW GROUND FLOOR



Notice board guide to departments facing the front main entrance on the ground floor

THE original shop and most of the fittings were designed about 27 years ago, and although little was radically wrong, it was felt that it was time for a major refit. It was decided that all the floors, with the exception of the fourth and fifth and the barber's shop on the lower ground floor, were to be entirely modernized. The first phase—up to the first floor—in now complete.

Before the design was commenced, the latest examples in the U.S.A. and Italy were visited by the architect and one of Austin Reed's directors to see what the current trends were in this special field. Work seen in Italy proved to be the most interesting.

Since the shop was originally planned, it had expanded down the street towards Piccadilly Circus and the existing main entrance had become badly placed. For this reason, a new central entrance has been made together with a new subsidiary entrance on the corner of Vigo Street. A new lift has also been provided as the two existing ones were inadequate for present day requirements.

One of the most important rearrangements needed was to move the shirt department from the first to the ground floor, thus allowing the first floor to be turned into a leisure wear department. In planning the fittings, large regular shapes were made out of the irregular shaped building by putting stock rooms, etc., in the angles and corners. These regular areas have been emphasized by false ceiling treatments which eliminate beams and

The refixtured ground floor looking towards the new main entrance. The new positions of the entrances may be compared with the old plan, on the facing page

create a spaciousness which was not apparent in the old shop.

At the client's request, only two sizes of drawers have been used, one for shirts and one taking most other goods sold in the shop with, of course, the exception of clothing. There are also a number of special fittings for socks, ties, etc. This arrangement gives the utmost flexibility and enables goods to be easily transferred from one part of the shop to another.

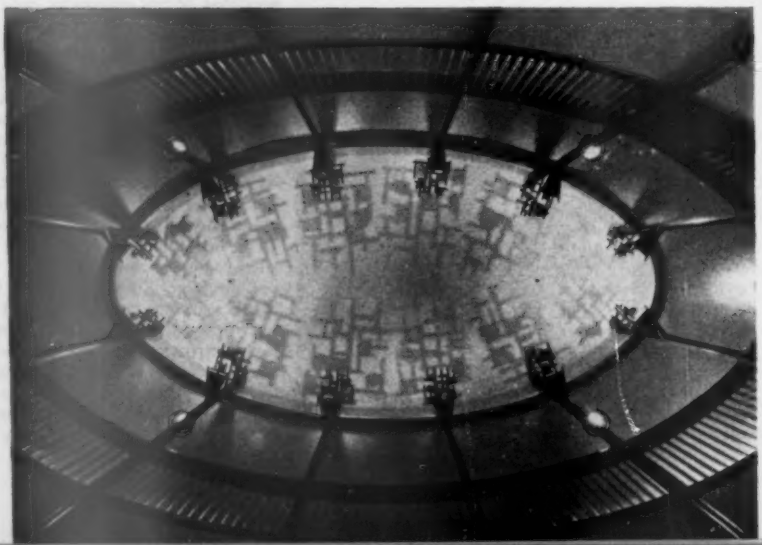
The Vigo Street entrance was provided as it was considered that it would encourage the shy type of customer to walk through the shop knowing that there was an alternative way out. Cigarette kiosks, etc., have been positioned between the entrances to encourage casual sales. One of the main improvements on the ground floor has been to increase the sales area by incorporating an existing light well at the rear of the premises. This has considerably improved the spaciousness of the shop near the main entrance. Another major change has been to make further openings on the ground floor in the main party wall which tended to divide the shop into two. Owing to fire regulations, all these openings have had to be fitted with shutters necessitating deep reveals. With the skilful use of mirrors the apparent depth of these is not great and an interesting illusion of space has been created. Eric Peskett, the sculptor, was commissioned to design the cast cement fondu panels that conceal

FIRST FLOOR

Top left, the ground floor remodelled for the shirt department with kiosk in the centre. Middle, the pullover section on the first floor, see plan above. Bottom right, looking up through the oval void to the first floor. The shadow lighting round the sides of the well was designed by John McCarthy

one of these sliding fire shutters just inside the main entrance.

In the old shop, one of the main features was an internal well between all floors up to the third. Rather reluctantly, it was decided to fill this in at the second floor level. One reason for this decision was that it was extremely difficult to control heating when so large a volume of air could circulate easily from floor to floor. The remaining portion of the well has been modified in size and shape. The heating of the store was originally by oil-fired boilers and embedded low pressure panels in the ceilings and floors. As the boilers were due for renewal, it was decided to change over to electrical heating throughout. The old boilerhouse has been cleared and valuable space gained.



At first floor level looking towards the void with the trouser and waistcoat fitting in the right foreground.

Materials used

Lower ground floor

Floor—travertine.

Walls—anodised aluminium; rosewood or larch veneered panelling; solid African mahogany.

Ceiling—fibrous plaster panels rendered and set.

Fittings—satin chromium plated steel tubing for framing; African mahogany or rosewood.

Ground floor: shop front

Stallriser, reveals to main entrance and fascias—ebony black granite.

Canopy soffit—satin stainless steel burnished in contrasting directions.

Canopy edge—bronze finished with a special cellulose finish.

Lobby floors—travertine.

Entrance doors—satin chromium plate frame with ribbed rubber push plates and vitreous enamel handles.

Name plates—satin stainless steel with black engraved letters.

Vigo Street entrance—walls and framing to screen—teak.

Ground floor: interior

Fittings—similar to lower ground floor.

Walls—similar to lower ground floor, but with some areas of figured European cherry.

Free standing columns—faced with Westmorland green slate.

Floors and ceilings—similar to lower ground floor.

First floor

Floor—teak with carpet areas.

Ceiling and walls—as ground floor but main panelling larch veneered.

Fittings—mahogany with satin chromium plated steel framing.

Artists:

Screen wall on ground floor: Eric Peskett.
Stained glass on ground floor: John Baker.
Mural on lower ground floor: Robin Denny.
Shadow lighting on first floor: John McCarthy. Austin Reed Limited emblem: Milner Grey.

General Contractors:

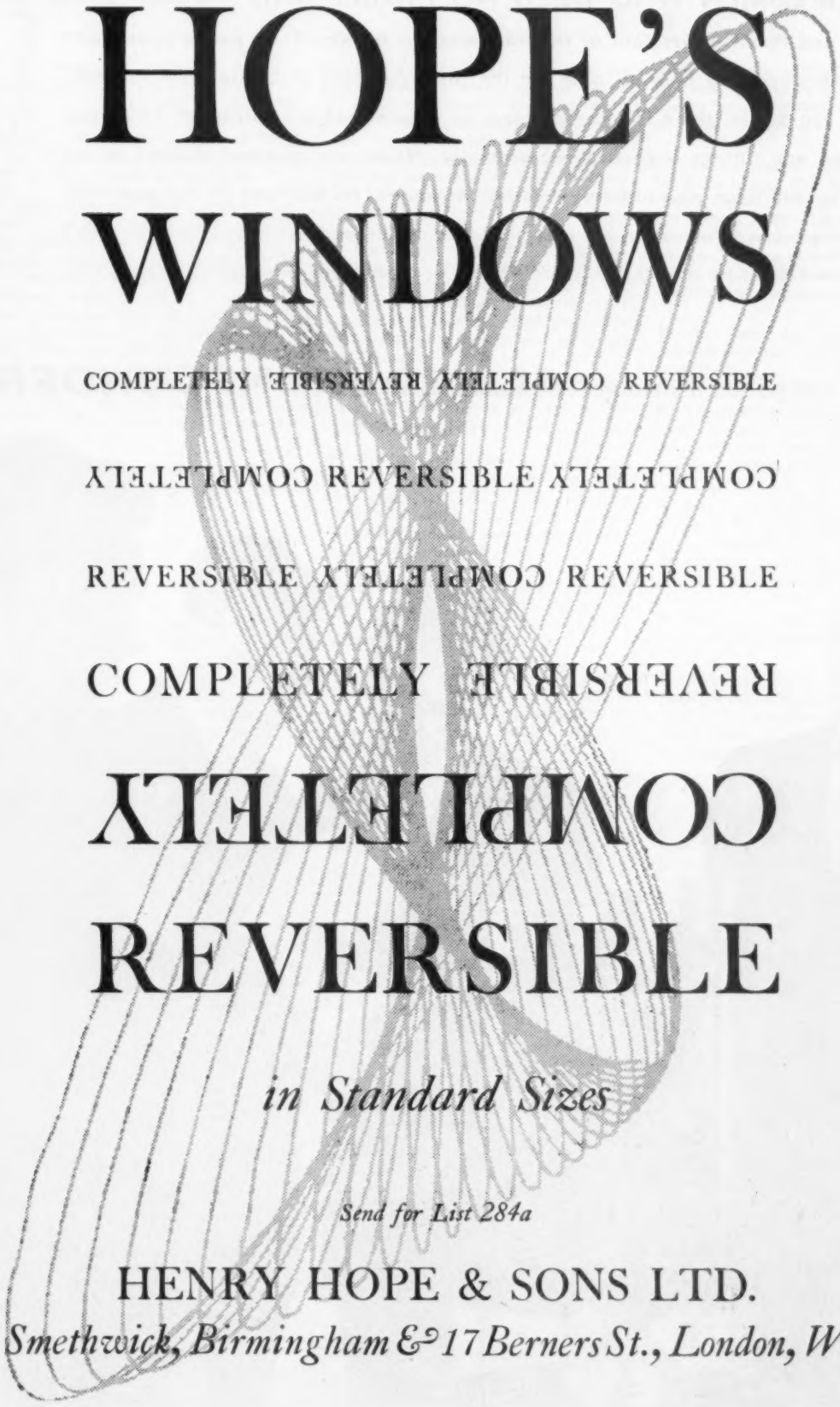
Hall, Beddall & Co. Ltd.

Sub-contractors and direct contractors:

Carpets: Hille of London Ltd.; Heal's Contracts Ltd. *Cash System:* Lamson Engineering Co. Ltd. *Chairs:* Hille of London Ltd. *Curtains:* Primavera. *Electrical Installations:* Austin Reed Ltd. *Fire Doors:* Mather & Platt Ltd. *Light Fittings and Electric Heater Units:* Venreco Limited. *Marble and Granite:* W. Fenning and Co. Ltd. *New Lift:* Otis Elevator Co. Ltd. *Reinforced Concrete:* Diespecker & Co. Ltd. *Shopfitters:* Harris & Sheldon Ltd. *Signs:* Pearce Signs Ltd. *Sprinklers:* Automatic Sprinkler Co. Ltd. *Structural Steel:* Moreland Hayne & Co. Ltd. *Ventilation:* Rosser & Russell Ltd. *Windows and Staircase Handrail:* James Gibbons Ltd.

Lower ground floor. Above, travelling case section. Below, shoe display. The mural on the left is by Robin Denny

Left, the repositioned Regent Street entrance and new canopy. Right, the new Vigo Street entrance



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rainwater and soil goods division of **ALLIED IRONFOUNDERS**

KETLEY WELLINGTON SHROPSHIRE

industrial notes

● Following the success of the first International Pipes and Pipelines Exhibition held at Earls Court in June, the second exhibition is already being planned and will take place at Earls Court from April 10 to 15, 1962, possibly with an increased ground floor area.

● The Laminated Plastic Fabricators' Association has been formed to promote the application of fabricated laminated plastics and to encourage the specification by architects, builders and others, of products manufactured by members of the Association. The Association hopes to achieve this by arranging publicity, exhibitions, demonstrations and meetings and discussions. Applications for membership should be addressed to the Secretaries, Peat, Marwick, Mitchell & Co., Chartered Accountants, at 11 Ironmonger Lane, London, E.C.2.

● An Extraordinary General Meeting of Turner & Newall Ltd. is to be held in Manchester on August 25, 1960, to approve resolutions to increase the authorized capital of the Company and the capitalization and application of reserves.

● The domestic boiler division of Sunrod Ltd. has been acquired by the Midland Aluminium group and will be known as Sunrod Domestic Appliances Ltd. It will work in association with Midland Aluminium's Glow-Worm Boilers Ltd. Mr. H. A. S. Moule, sales director of Glow-Worm, and Mr. F. P. Webster, managing director of Midland Aluminium Ltd. and of Glow-Worm Boilers Ltd. have respectively been appointed executive director and managing director of the new company.

● The Dunlop Rubber Co. Ltd. has made a new colour film, illustrating four of its products. These are:—the special grade of Polimul polyvinyl acetate copolymer emulsion which forms the basis of Pammastic plastic emulsion paint (manufactured by Blundell, Spence & Co. Ltd.), the Seafarer life raft, tennis balls and Dunlop tyres. The film runs for 17min and is obtainable from the Dunlop Film Library, Wilton Crescent, Merton Park, London, S.W.19.

● The George Cohen 600 Group Ltd. show a net profit after taxation of £785,071 for the year ended March 31, 1960. A final ordinary dividend of 8½ per cent has been proposed, making a total distribution for the year of 13 per cent, less tax.

● Bakelite Ltd. have appointed Mr. James A. Wordingham as sales promotion manager of Warerite Products.

● Mr. B. Hollingworth, A.M.I.E.E., has been appointed assistant sales manager (mining) of British Insulated Callender's Cables Ltd. He succeeds Mr. J. A. Rodgers who is now divisional sales manager (accessories).

● Mr. Wallace Wilson, A.M.I.E.S., has been appointed general sales manager of Richard Baxendale & Sons Ltd., of Chorley, Lancs.

● Granada Group Ltd. have awarded a contract, value £21,000, for the installation of a new heating, ventilating and hot water system at their London offices in Golden Square to J. H. Nicholson & Co. Ltd., of Southwark Street, London, S.E.1. Potterton boilers and Sturtevant ventilating equipment are amongst the items to be installed.

● An Asbestolux lightweight partition, mounted on an 18g steel frame has been tested by the Joint Fire Research Organization at Boreham Wood. This partition achieved 4hr grading and is claimed to provide similar protection to that given by a 4½in brick wall.

● Lord Chandos, chairman of the Northern Ireland Development Council, recently opened Carbide Industries Ltd.'s new factory at Maydown, near Londonderry, Northern Ireland. This factory will produce calcium carbide and acetylene and is the first plant of this kind to be built in Northern Ireland.

● Mr. Colin Baillieu has been appointed publicity manager of Chemstrand Ltd.

● The Prestcold Division of the Pressed Steel Company Ltd. have reduced the price of their new Big Four D.432 refrigerator from £70 12s 6d to 63gn.

● Mr. R. G. Harman, general manager of the North British & Mercantile Insurance Company, has been appointed chairman of the Fire Protection Association in succession to Mr. A. F. O'Shea.

● Mr. L. A. L. Brown has resigned from the board of Constructors Ltd.

● Newmans Tubes Ltd. show a net profit for the year ended January 31, 1960, of £155,730, compared with the previous year's result of £98,025. An ordinary dividend of 20 per cent is to be paid.

● The name of Doulton Mashman Pty. has been changed to Doulton Sanitary Potteries (Australia) Pty., and the company will form part of the Royal Doulton Group. Mr. E. J. T. Mashman has resigned and his place as chairman has been filled by Mr. Frank Mills.

● Mr. Godfrey E. Liardet has been appointed to the board of Roadless Traction Ltd.

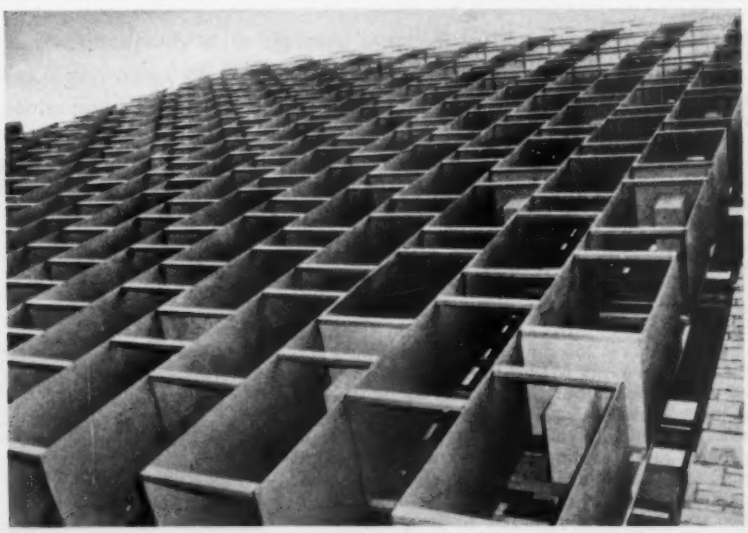
● Mr. G. C. Ottway has been elected President of the Council of Scientific Instruments Manufacturers' Association for 1960/61.

● Mr. P. Shand Kydd and Mr. F. K. Sugden have been appointed to the board of K. L. Holdings Ltd.

● I.C.I. Ltd. have appointed Mr. G. F. Whitby and Dr. E. D. Abbot as chairman and managing director, respectively, of their Fibres Division.

● The Consett Iron Co. Ltd. show a net profit for the past year of £1,693,990. A final dividend of 5¾ per cent is to be paid.

The sun grille of this new office building in Melbourne consists of 181 boxes constructed in Crystic, a glass fibre reinforced polyester resin made by Monsanto Chemicals (Australia) Ltd., under licence to Scott Bader & Co. Ltd. Panels measure 4ft 4in by 2ft 6in by $\frac{3}{16}$in. Designer: W. Tresize. Architects: Buchan, Laird & Buchan Pty. Ltd



ADDENDUM

The Phœnix Rubber Co. Ltd. have moved from the Bishopsgate address indicated on page 788 of our issue of June 15, 1960. Their correct address is now 2k, Buckingham Avenue, Trading Estate, Slough, Bucks.

In this feature are reviewed new lines introduced to the building industry for the first time and additions or improvements to existing ones. Any advantages claimed for a product are from information supplied by the manufacturer

Ceiling Switch and Matching Rose (A)

This company has recently introduced the Cordcone ceiling switch and Flexcone matching ceiling rose. The Cordcone switch has an inductive rating of 13A for lighting or power and is suitable for the control of motors and fluorescent lighting installations. It is available in single pole one- and two-way, double pole one-way, with or without a pilot light, for applications which require remote indication or to denote a live load. The fitting conforms to B.S. 2652 : 1955 for cord operated switches and there is room for cable storage in the base of the switch which operates successfully at any angle up to 90 degrees from the vertical. It is completely insulated and supplied in brown or ivory. The Flexcone rose has a cover fitting over it which is supplied in either brown or white. The closed back does away with the need for a pattress and conforms to Regulation 207G, 13 edition I.E.E. Regulations. The flange pattern is for conduit box fixing or for covering rough ceiling holes. It has a cord grip and the terminals are angled for easy wiring. The fitting complies with the requirements of B.S. 67 : 1938. When fitted, fixing screws are not visible with either of these items. Illustration shows the Cordcone ceiling switch.

Falk Stadelmann & Co. Ltd., 91 *Farringdon Road, London, E.C.*1. *Holborn* 7654.

Readers' Information Service, Ref. A. Date 3/8/60.

★

Oil-fired Packaged Boiler (B)

The Allen Ygnis oil-fired boiler is of the triple pass super economic radiant type in which the combustion chamber and oil burner provide a turbulence within the combustion chamber resulting in two passes being made within the chamber itself and only the third and last pass being made through flue tubes. This sequence of passes is claimed to increase the radiation effect before making the final pass through the flue tubes. The boilers are suitable for operation on low, medium and high pressure hot water installations and a minimum efficiency of 85 per cent is guaranteed with correct control and maintenance. The front of the boiler is formed by a hinged water jacketed door which, when opened, gives full shell diameter access to the combustion chamber and flue tubes for cleaning. The burner is independently hinged to the boiler front and the flue tubes are fitted in circular formation round the furnace tube. There are no refractory linings and it is claimed that when 35, 200 or 960 sec fuel oil is used, operation is smokeless. The burner is of the pressure jet fully automatic type. The boiler is manufactured by W. G. Allen & Sons (Tipton) Ltd., under licence from the Swiss firm of Ygnis A.G.

Flexaire Ltd., 268/270 *Vauxhall Bridge Road, Westminster, London, S.W.*1. *Victoria* 2006.

Readers' Information Service, Ref. B. Date 3/8/60.

★

Rubber Joint Sealer (C)

From Sweden comes news of Trebofog a semi-fluid rubber based compound for the sealing of joints in houses built from prefabricated concrete elements. The vulcanizing process, which takes about a week to complete, is carried out by adding an accelerator to the compound before applying it by spray gun. It is claimed that Trebofog contains no dissolvents or volatile ingredients capable of causing evaporation, shrinkage or premature drying and that caulking is generally unnecessary if a foam rubber strip is placed in the joint before using the compound. Other claims made on behalf of the new jointing medium are that it is long lasting, impervious to damage from weather or atmospheric conditions, is capable of taking up the variations in movement caused by temperature changes without cracking or becoming loose and has a tightening effect against the rough surfaces of the joints.

Trelleborgs Gummifabrik, Stockholm, Sweden.

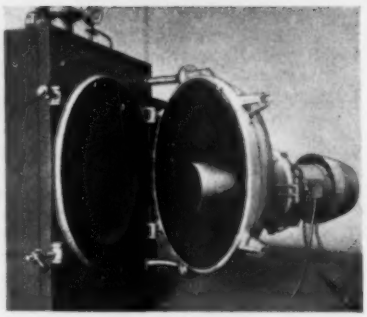
Readers' Information Service, Ref. C. Date 3/8/60.

★

New P.V.C. Sheet

Vybak DVR.258 is a new grade of chemical resistant P.V.C. sheet, with high-impact strength, developed by this company for the chemical plant and associated industries. The material is a rigid-flexible composite sheet and is particularly suitable for tank lining applications. The flexible portion gives added strength to the sheet and is more easily cemented to metal than rigid sheet. The rigid side, in its turn, has superior chemical resistance to the flexible portion. DVR.258 can be sawn and drilled and is easily welded by the hot gas welding technique. As a result of its thermoplastic nature, it is easily formed by heating to around its softening point and cooling in contact with the desired contour. It is not, however, recommended for applications where resistance is required to temperatures in

Cordcone ceiling switch by Falks **(A)**



Allen Ygnis oil-fired boiler by Flexaire Ltd. **(B)**

Trebofog rubber compound being used as a joint sealant **(C)**

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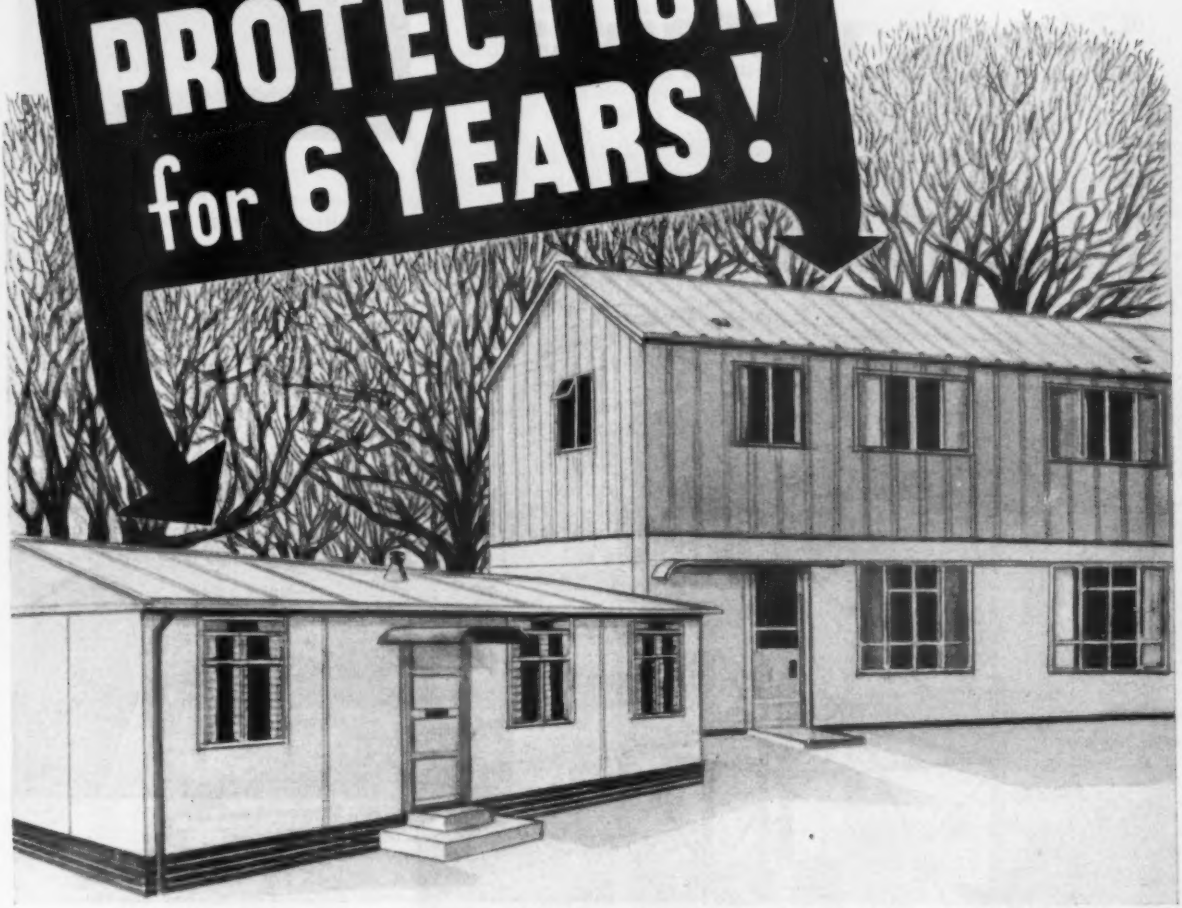

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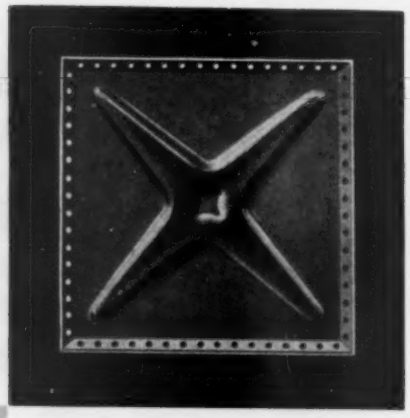
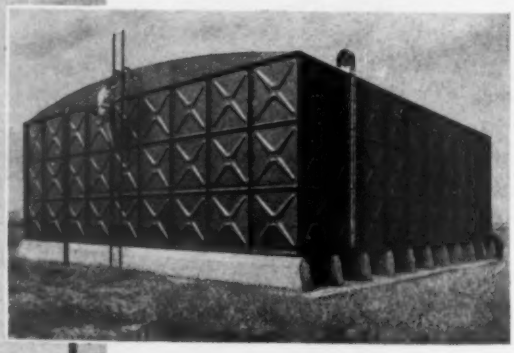
BRAITHWAITE Pressed Steel Storage Tanks



Effective storage (from 220 gallons upwards) for water, heavy fuel oils and other liquids. These tanks, which can be enlarged or altered to meet varying needs, are light, strong and simple to erect with all tools supplied.



(left) 27,600 gallon covered tank 24' square x 8' deep with access ladders, supporting structure and valve control platform, supplied and erected at a housing estate.

(inset) Another covered tank for agricultural estate development, 40' x 30' x 12' deep, capacity nearly 105,000 gallons.

Illustrated leaflet on request

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excess of 140 deg F. DVR.258 is available in various colour combinations. Recommended adhesives: Evo-Stick SH64/1 or Armstrong Cork Adhesive W.420. Finish: flexible surface—matt; rigid surface—commercial bright. Sheet sizes: 96in by 48in. Thicknesses: 1/16in, 1/8in, 3/16in and 1/4in.

Bakelite Ltd., 12-18 *Grosvenor Gardens, London, S.W.*1. *Sloane* 0898.
Readers' Information Service, Ref. D. Date 3/8/60.

★

New Fluorescent Fitting (E)

The Revo Uti-Lite fluorescent fitting is basically available as a single lamp batten fitting but a steel reflector may be purchased separately. To convert the batten to a reflector fitting, the lampholders should merely be passed through the bridges in the top of the channel, the channel inverted and the reflector attached with two screws. In both forms the fitting can either be fixed by chains, direct to the ceiling, by conduit tubes or direct to a B.S. conduit box. The channel houses the detachable gear tray with Revo polyester control gear. The bi-pin holders and their decorative covers are moulded in white plastic. The Uti-Lite can be supplied either as a 5ft 80W or as a 4ft 40W single lamp unit. Reflector finish: white stove enamel. Price: £3 17s 6d (5ft) and £3 5s (4ft).

Revo Electric Ltd., Groveland Road, Tipton, Staffs. Tipton 2828.
Readers' Information Service, Ref. E. Date 3/8/60.

★

Floor Heating Control Units (F)

This company has produced a range of control units with timed outlets for domestic and industrial installations of floor heating, storage heating, water heating and lighting. These units are purpose made to individual requirements and provide automatic operation of certain appliances when unattended or at off-peak tariff periods. Being purpose made, the units vary considerably but the unit illustrated comprises a synchronous motor-driven time switch with provision for the adjustment of on and off times, a double pole on/off switch and mercury switch relay type LQA rated according to the requirements of the unit, individually fused circuits and a sheet steel casing to house all components. The time switch can also have a spring reserve and a week-end cut-out. To meet other needs, the units can include more than one relay, additional time switches or timers and fuses to cover all circuits being controlled. The mains on/off switch can be rated up to 60A 250V a.c. and the fuses for individual circuits up to 30A 250V a.c.

*Londex Ltd., Anerley Works, London, S.E.*20. *Sydenham* 3111.
Readers' Information Service, Ref. F. Date 3/8/60.

Low Cost Bathroom Suite (G)

The Glenthorne bathroom suite, although being modern in styling, is obtainable on a low cost basis. It consists of a 5ft 6in by 2ft 4in overall, porcelain enamel cast-iron bath with ½in C.P.E.C. pillar valves (B.S.S. 1010 with star heads, screwed shanks and back nuts). The waste is 1½in C.P.E.C. with screwed shank and back nut, plug and chain. The overflow is 1¼in C.P.E.C. and the bath is fronted with a black hardboard panel. The second item of the suite is a 22in by 16in glazed, earthenware lavatory basin, with soap recesses and overflow. C.P.E.C. ½in pillar valves to B.S.S. 1010 are fitted together with 1¼in waste, plug and chain and painted cast-iron towel rail brackets. The third item is a glazed earthenware low level suite, comprising 2gal low level cistern and cover, with C.P.E.C. lever handle, ½in B.S.S. 1212 H.P. ballvalve, polythene syphon and concealed wall brackets. There is a C.P.E.C. flushbend and plate connector and an "S" or "P" trap pan is covered with black plastic seat and cover. The Glenthorne suite, as listed, costs £39 19s and is available in shell pink, primrose, turquoise and sky blue. Optional extras are as follows:—Bath—black end panel, 6s 8d; coloured front panel in lieu of black, 10s 7d; coloured end panel, 5s 7d; stainless steel angle strip 24in by 1½in, 8s 4d; stainless steel flat strip 24in by 1½in, 4s 6d; bath trap 1½in shallow seal "P" lead outlet, 7s 10d. Basin—pedestal in lieu of brackets £2 16s 6d; 25in by 18in basin in lieu of 22in by 16in, £1 5s 8d. Low level suite—coloured seat in lieu of black, 7s 9d; low pressure ballvalve, 1s 8d.

*W. N. Froy & Sons Ltd., Brunswick Works, Hammersmith, London, W.*6. *Riverside* 4101.
Readers' Information Service, Ref. G. Date 3/8/60.

★

New Flexible Hose

The Hi-Flex 1104 flexible hose is made of Neoprene and is of flax-braid construction. A range of push-in end fittings is available for the hose and the construction is such that these end fittings will hold without the use of conventional clamps or clips. The combination of Hi-Flex 1104 and these specially designed inserts, which can be fitted without tools in five seconds, cuts replacement time to a minimum. The one-braid hose is available in bore sizes up to 1in and will give a working pressure of 300 p.s.i. Crimped end fittings are recommended for use with two-braid hose which allow working pressures of up to 800 p.s.i. These are factory fitted and can be supplied to suit customers' requirements. The push-in fittings are supplied with plastic end caps for protecting hose ends.

*BTR Industries Ltd., Herga House, Vincent Square, London, S.W.*1.
Readers' Information Service, Ref. H. Date 3/8/60.

Uti-Lite fluorescent reflector fitting by Revo Electric Ltd. **(E)**

Floor heating control unit by Londex **(F)**

Glenthorne bathroom suite by W. N. Froy & Sons Ltd. **(G)**

Self-drilling Concrete Anchors (I)

Phillips Red Head self-drilling, permanent concrete anchor system, widely used in the U.S.A., has now been introduced into this country. The Red Head is a hollow core, case hardened steel expansion shell, threaded to receive Whitworth bolts, with cutting teeth at one end and a tapered collar at the other. It should first be driven into the concrete by impact hammer, for it will cut its own close fitting hole without spalling. The shell should then be completely removed from the hole and a special plug inserted into its toothed end. Next, the Red Head should be reinserted and driven home. The presence of the plug will cause the cutting teeth to splay outwards and undercut the bottom of the hole. Finally the protruding collar end can then be snapped off to leave the anchor flush with the surface of the concrete and ready to receive its bolt. Test reports from the Pittsburg Testing Laboratory support the claim that the load capacity of the anchor is equal to the strength of the concrete in which it is set. Red Heads can be installed by hand and there is a complete line of interchangeable chuck components to fit all makes and models of air and electric impact hammers. Snap off anchors are available for ¼in, $\frac{5}{16}$in, ⅜in, ½in, ⅝in, ¾in and ⅞in bolt dia. Other anchors suitable for tie wires, studs, rod hangers and clinch nails can also be supplied.

Phillips Drill Company, 10 *Union Court, Old Broad Street, London, E.C.2. Avenue* 7901.

Readers' Information Service, Ref. I. Date 3/8/60.

★

Portable Conveyor (J)

The Cadet portable conveyor uses a belting made by the Dunlop Rubber Co. Ltd. and has 2in corrugated sides. It can be operated at any angle up to 45 degrees and will load up to a height of 17ft with one end on the ground. The central height can be varied from 3ft 3in to 8ft 6in. It is mounted on pneumatic tyred wheels and there is a towing bracket at the hopper end. The hopper is generally used for loading loose materials and its capacity can be increased by adding extension pieces. Both bracket and hopper are detachable. Either petrol or electric motors can be supplied for external drive or else an electric motorized drum can be fitted. The Cadet is stated to have a capacity of up to 75ton per hr, depending upon the type of material being moved, and on the operating angle. The conveyor is suitable for handling such bulk materials as grain, sand, coal and coke, sacks, bales or cases. Standard belt widths are from 9in to 36in.

Numec Ltd., New Whittington, Chesterfield. Chesterfield 7959.

Readers' Information Service, Ref. J. Date 3/8/60.

Oil-fired Boiler (K)

The SA 45 oil-fired boiler has been added to the Valor range of such products. It has a rated output of 45,000 B.Th.U/hr, is designed for larger houses or small offices and business premises and is capable of handling 8 to 11 radiators and a 30gal hot water tank. Basically it employs the same design as the earlier SA 25 and SA 35 models (See New Products, A. & B.N., January 1) and can be used either for heating water or for a combination of hot water, radiators or skirting board heating. Features of the SA 45 are easy removal of burner assembly merely by unscrewing a set of wing nuts; built-in oil control valve with safety non-flooding device; a thermostat to control boiler temperature within the 140 deg to 180 deg F range. The boiler uses the Valor Blue Flame sleeve burner and the Pilot Flame is a turn-down device for economical running. A dial thermometer is mounted centrally on the outside casing and for visual flame checking there is a glass fronted inspection port hole. A vitreous enamelled draught diverter is supplied with the unit so that the boiler only requires placing on a level base and coupling to the water supplies and an existing chimney or standard dimension flue pipe. Finish: hard white enamel. Fuel consumption from bulk storage tank: 3pt/hr at maximum running. Overall dimensions: 43½in high by 19in wide by 21½in deep. Price: £90.

The Valor Company Ltd., Bromford, Erdington, Birmingham 24. *Erdington* 6151.

Readers' Information Service, Ref. K. Date 3/8/60.

★

Glass Fibre Tubes and Ductings

This company is now in a position to manufacture glass fibre reinforced polyester pipes and ductings. Pipes will be produced with bore dimensions ranging from 1½in to 20in and in lengths of up to 40ft without joints. Wall thickness of the material can be varied between 1/64in and 3/16in. By variation of weaves of glass fabric, i.e. square weave, satin weave and unilateral weave, pipes can be designed to give major strength characteristics to suit specific applications. In addition, by incorporating synthetic fabrics of the Terylene type, chemical and abrasion resistance can be developed to meet severe corrosion problems. Oval cross-section tubes can also be produced. Typical applications for the new products would appear to be ventilation ductings in mines and factories, pipework in chemical plants, boat masts and spars, flag poles and pipework where anti-corrosion and/or light weight requirements are essential.

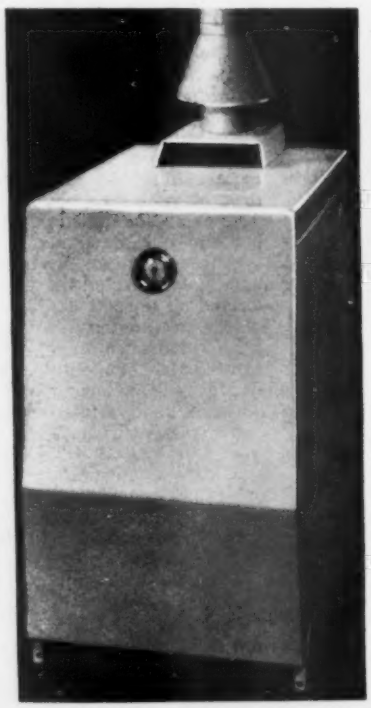
Flexo Plastic Industries Ltd., South Chingford, London, E.4. Silverthorn 1101.

Readers' Information Service, Ref. L. Date 3/8/60.

Top: Phillips Red Head self-drilling concrete anchor (I)

Centre: Cadet portable conveyor by Numec Ltd. (J)

Below: The Valor SA 45 oil-fired boiler (K)



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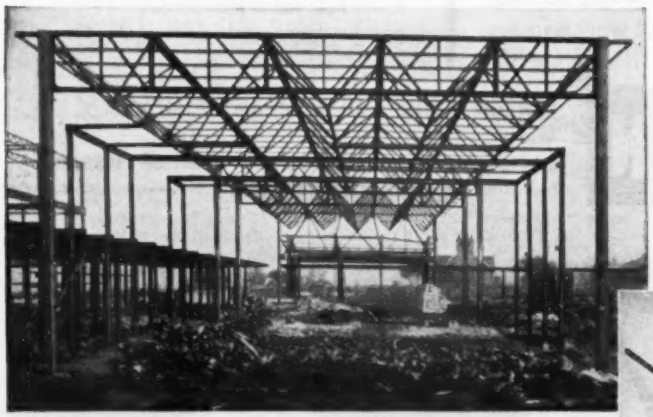

Above: Gravesend Gordon School for Kent County Council. Architect Elie Mayorcas, F.R.I.B.A. Right: Lewsey Road and Ashcroft Schools, Borough of Luton. Architect M. H. G. Blackman, A.R.I.B.A.

was evolved to meet today's rapidly expanding school building programme.

The Hotchkiss system is entirely flexible allowing Architects complete freedom of planning. All units are of welded construction and comply with British Standard Specifications (including B.S.449).

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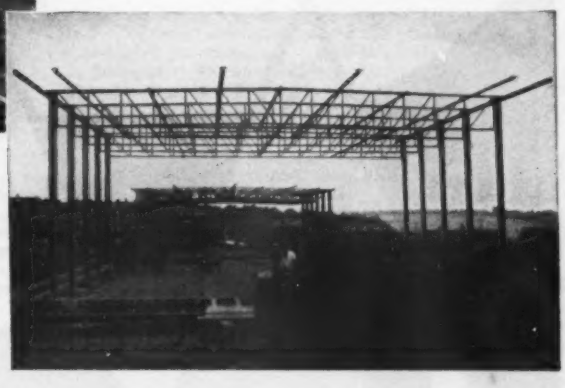
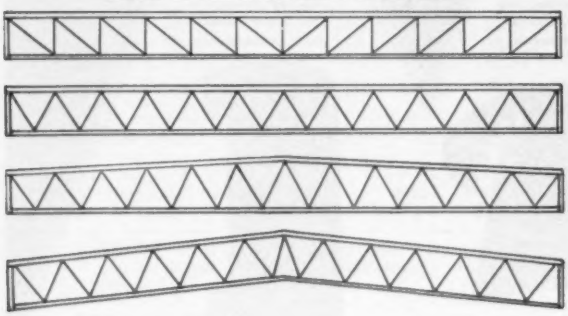


A FEW OF THE BASIC LATTICE GIRDERS



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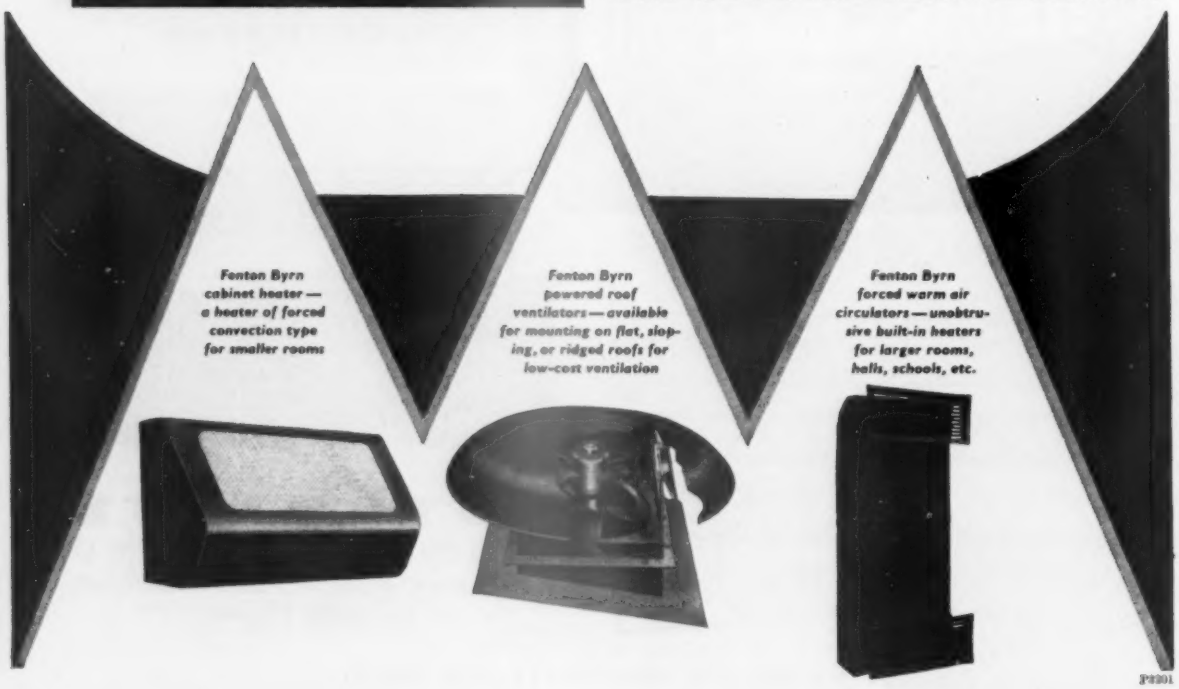

Fenton Byrn cabinet heater — a heater of forced convection type for smaller rooms

Fenton Byrn powered roof ventilators — available for mounting on flat, sloping, or ridged roofs for low-cost ventilation

Fenton Byrn forced warm air circulators — unobtrusive built-in heaters for larger rooms, halls, schools, etc.

P2201

CURRENT MEASURED RATES (LONDON)

These apply to new work of normal character and some size. These rates are for time and materials only and carry 10 per cent in excess, so the appropriate essential on-costs should be added. The basis cost of material used in the calculation of these prices is taken from the foregoing tables which carried up to August 3, 1960.

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ESSENTIAL ON-COSTS

Fees payable to L.C.C. for District Surveyor:

The new buildings of ordinary construction not exceeding 5,000 cubic feet	£3
Over 5,000 cubic feet for every extra 1,000 cubic feet up to 1,000 cubic feet add	4/–
Buildings over four storeys add 3*d* per 1,000 cubic feet extra for each storey up to eight	3*d*

ALTERATIONS AND ADDITIONS

Up to £100 cost		£3
Over £100 up to £1,000—	Per £100 cost	15/–
Over £1,000 up to £5,000	Ditto	5/–
Over £5,000	Ditto	3/–

Public buildings add 50%

Steel framed or R.C. buildings.—See L.C.C. (General Powers Act 1955) also fees in respect of means of escape in case of fire.

Allowance to cover National Insurances, Holidays with Pay and Public Holidays, Welfare, Third Party Risk, Travelling and Guaranteed Week is made in the rates attached to the items.

Allow for Fire Insurance	1/6%
Allow for Water for use on the works and apparatus	5/–%
Allow for hoarding, or similar licences in City of London	say £10
Do., under Borough Councils per each month	say 2/6
Allow for Office, Fire, Attendance on C. of W., etc. p. week	say 40/–

ADMINISTRATION AND CONTROL

Percentage costs on normal contracts in accordance with Builders Turnover per Annum, see appropriate column hereunder:

	Turnover in Thousands			
Place	25	50	75	100
At depot	13%	9%	7%	6%
On job	6%	5½%	4½%	4%

SPOT ITEMS AND DEMOLITION, ETC.

	Per ft run
Hoarding erected and removed	20/–
Planked gangway with handrail, etc. do.	10/–
Proper gantry do.	78/–
Sleeper roadways	16/6
Needling, strutting and shoring including all labours and use and waste in erection and removal	Per ft cube 20/–

ALTERATION-DEMOLITION—	1 Brick	1½ Brick	2 Brick	Per yard cube
	(Per ft super)			
Cutting out cement concrete or brickwork in small quanties	1/3	2/6	3/7	64/–
Do. if either in very small quantities or reinforced	2/2	4/1	6/–	95/–
Debris into baskets and removed from inside to outside of bldg.	3½*d*	7*d*	9*d*	14/–

SCAFFOLDING (Avg. 45ft high)

Per yard superficial	1 month	Period 3 months	5 months
Putlog type—4ft 6in lift	8/–	10/6	13/6
Do. —6ft 0in do.	5/6	8/–	10/6
Independent type—4ft 6in lift	10/6	14/6	19/–
Do. —6ft 0in do.	7/6	10/6	13/–

EXCAVATION Per Yard Cube *By hand*	Common Soil	Loamy Clay	Gravel or Clay	Rock or similar
Reducing levels	7/6	8/10	10/3	68/–
Surface trench not exceeding 5ft deep	14/10	17/8	23/7	84/–
Do. from 5ft to 10ft	27/–	30/4	36/4	91/6
Do. from 10ft to 15ft	30/9	36/7	42/11	100/–
Fill in and ram	6/-	6/7	6/7	6/5
Barrowing 25yd	3/3	3/7	3/7	4/2
Load vehicles and tip 8 miles away	18/9	18/9	19/9	20/7

PLANK AND STRUT	To 5ft deep	5 to 10ft deep	10 to 15ft deep
To trenches, in normal ground	7*d*	8½*d*	10*d*
Per Ft Super			

CONCRETE 1½in Ballast Aggregate	Per yard cube
1 : 3 : 6 Cement concrete in foundations	80/–
Do. around grillages	83/–

REINFORCED CONCRETE

1 : 2 : 4—¾in concrete, worked around reinforcement, between formwork in the following (at various levels):—	Per cubic yard
Foundations and surface beds	89/10
Walls, 12in thick or more	96/3

Sectional inches	Lintols and beams	Columns and casings	Braces and projections	
Up to 36	4/7	5/2	5/4	Per cubic ft
36 to 72	4/8	5/–	5/2	do.
72 to 144	4/5	4/11	5/1	do.
over 144	4/3	4/10	5/–	do.
Walls 6in thick			18/–	Per super yd
Do. 9in thick			26/–	do
Suspended floors average 6in thick			18/6	do.

REINFORCING RODS (round) bent and placed. (Ex Mills)— Per cwt.	¼in	⅜in	½in	⅝ to 1in
In floors and beams	92/–	80/–	75/9	67/6
In walls	98/–	85/–	79/9	70/6
In columns	105/6	90/3	81/–	73/9

FORMWORK and Supports (4 times use)— Floor soffits	Beams	Walls	Columns
20/3 per yard	3/–	2/8	2/8 per super ft

BRICKWORK

BRICKWORK per YARD superficial reduced to ONE BRICK in thickness (scaffold to add)—	In 1 : 3 cement mortar
Flettons or other similar *at* 122/– per 1,000	42/6
Mild Stocks or do., *at* 260/– per 1,000	60/–
Second Stocks or do., *at* 339/– per 1,000	66/8
Southwater engineering or similar bricks, *at* 400/6 per 1,000	78/–
Blue Staffordshire wire cut *at* 547/– per 1,000	95/–
Deduct if 1 : 1 : 6 Cement-Lime mortar is used in lieu of 1 : 3 Portland Cement mortar	2*d*
Add if brickwork commences above ground level	4/9
Do. if in backing to masonry including cutting and waste for bonding	3/10
Do. If circular-on-plan	9/–
Do. If in underpinning	9/–

BRICKWORK IN THICKNESS NOT REDUCED— Per yard superficial	Brick, on edge walls	Half-Brick walls	1 Brick finished fair both sides	11in Hollow with 2in cavity and G.I. TIES
In Flettons or similar	18/6	23/7	43/8	49/3
In second stocks or do.	31/3	41/4	74/–	73/–
Add: for pointing as work proceeds, per side	1/9	1/11	1/9	1/9
Thickness to old walls, including cutting, toothing and bonding to same an average total thickness of ¾ brick	58/–	72/–	Fletton Stock per yd super	
Do. all as last but an average total thickness of 1½ bricks	79/–	102/6	do.	

WALLS BUILT IN SUPERIOR BRICKS— In 1 : 3 Cement mortar, fair faced and pointed on both sides as the work proceeds:—	Half-Brick	One Brick	
In first-quality Stocks at 375/–	45/–	75/–	Per yd super
In red facings at 330/–	38/6	67/9	do.
In blue pressed facings at 614/–	60/9	106/2	do.

GENERAL AND SUNDRY

Cut tooth and bond new brickwork to old		5/9 per ft
Damp-proof course, double slate, horizontal		4/9 super
Do., as last, but vertical		5/9 do.
Do., bitumen, Hessian base, horizontal		1/– do.
Frames, bed and point in cement mortar, one side		4½*d* per ft run
Window board of 6in by 6in by ¾in rounded on edge		
quarry tiles, bedded, pointed, cut and fitted		4/3 do.
Terracotta air bricks built in and pointed, including flue	9in by 6in 6/6	9in by 9in 11/6 each
Chimney pots, plain red, set and flaunched in cement mortar	1ft high 18/–	2ft high 26/– each
Metal windows, assembled, hoisted and fixed, lugs cut and pinned and frames bedded and pointed one side in cement mortar	Up to 5ft super 15/2	5ft to 10ft super 18/9 each
	10ft to 20ft super 28/5	20ft to 40ft super 47/– each
Leaving holes through walls for pipes and afterwards making good	Small pipes 3*d* per in in depth	Large pipes 6*d* per in in depth
Cutting do., and afterwards do.	11*d* do.	2/– do.
Cut mortices in brickwork or concrete for bolts or dowels and run in with cement grout		1/3 per in in depth, each
Holdfasts of stout iron hoop bent, holed and screwed to frame and built in		1/7 each

BRICKWORK—*continued*

FACING—

Extra only over common brickwork (122/– per 1,000) for facing with superior bricks in *Flemish bond* and pointing as the work proceeds.

Rustic Flettons (162/–)	5/– per yd super
White (220/–)	9/6 do.
First Stocks (375/–)	20/9 do.
Reds (350/–)	19/– do.
Blue pressed (614/–)	40/6 do.

If built in English bond, *Add* 12½% to above.
If do., half-brick stretcher bond, *Less* 25% off above.

COPING—

All labour and material in forming brick-on-edge coping with two course of roofing tiles under and cement weather fillets on both sides, built in cement and pointed as the work proceeds.

Per ft run	9in thick	14in thick
In picked Flettons	6/8	9/–
In first-quality Stocks	8/–	12/–
In red facings	7/5	11/11

Plumbing angles	2*d* per ft run
Fair cutting	1/– do.
Fair rake cutting	1/7 do.
Fair circular cutting	1/7 do.
Fair squint or birdsmouth	1/11 do.

ARCHES

Extra over Fletton brickwork for forming window head with red facing bricks set on end and with 4½in soffits and pointing	ft run 3/9
Do. for rubbed and gauged flat arch in red rubbers set in putty with fine joints	ft super 19/–

PARTITIONS

(75 yards)	Per yd super— 2in	2½in	3in
Concrete slab partitions in cement mortar	11/9	13/6	15/–
Hollow clay do.	13/5	15/6	18/–
Cutting and bonding at angles, intersections and ends	5*d* ft run		

PAVING

	1in	1½in	1¼in	
Grano trowelled gauge 5 : 2	8/6	9/6	10/8	yd super
1 by 5in skirting, square top and cove bottom			2/10	ft run
¼in by 6in red quarry tile paving			28/–	yd super
¼in by 6in do. skirting			2/–	ft run
Jointless flooring, ¼in thick			20/–	yd super

ASPHALT (normal conditions for 200 yds super and upwards)

	B.S. 1450/48	B.S. 1375/47 Brown	B.S. 1375/47 Red
¼in pitch mastic floor in one coat on felt underlay on prepared concrete base			
Per yd super	13/6	15/–	16/6
	Unit	Mastic B.S.988	Natural Rock B.S.S.1162/44
¾in in two thicknesses on felt underlay on prepared concrete base	yd super	14/3	18/6
Do. in narrow widths	ft super	2/–	2/7
¾in skirting 6in high, angle fillet at bottom splayed and turned in at top	ft run	2/4	2/7
External angles	each	6*d*	6*d*
Internal do.	each	10*d*	10*d*
Tanking or Damp Course		B.S.1097/43	B.S.1418/47
Vertical in two thicknesses	yd super	19/6	24/6
¾in horizontal do.	yd super	13/–	18/9
Vertical in three thicknesses	yd super	26/6	33/–
1¼in horizontal do.	yd super	19/–	27/6
Labour rounded external angle	per ft run	6*d*	6*d*
Do. internal angle fillet	per ft run	10*d*	11*d*
Do. double do.	per ft run	1/8	1/8
Collars to small pipes	each	3/6	4/–
Do. to large pipes	each	6/9	7/6

DRAINAGE

Excavate trench, and plank and strut to sides, consolidate bottom to fall, return, fill and ram earth after drain is laid and load and remove surplus. In ordinary ground—moderately firm. (By hand)

Per lineal yd	
1ft in depth	6/2
2 do.	10/5
3 do.	24/–
4 do.	31/–
5 do.	38/4
6 do.	57/8
7 do.	71/–
8 do.	84/–
9 do.	97/–
10 do.	110/–
11 do.	134/6
12 do.	152/–

Portland cement (1 : 6) concrete bed under drain pipes and benching up on both sides—6in thick	Per yd run 4in 18in wide 8/6	6in 20in wide 10/–	9in 23in wide 12/3

SALT GLAZED SANITARY DRAIN PIPES
and lay and joint with Yarn and Cement Mortar in trench.

Quality	Quantity	Per ft run 4in	6in	9in
"Best"	2ton or more	3/1	4/8	7/8
	100 pieces and over	3/8	5/6	9/4
	under 100 pieces	3/10	5/9	9/7
"Best Tested"	2ton or more	3/8	5/6	9/4
	100 pieces and over	4/7	6/10	11/6
	under 100 pieces	4/9	7/2	11/10
"British Standard"	2ton or more	3/4	5/–	8/2
	100 pieces and over	4/–	6/–	9/9
	under 100 pieces	4/1	6/1	10/2
"British Standard Tested"	2ton or more	3/11	5/10	9/10
	100 pieces and over	4/10	7/3	12/5
	under 100 pieces	4/11	7/5	12/9
Extra for bends "Best"—Contained in 2ton lots		4/2	6/3	16/6
Extra for junction "Best"—4in on 4in—6in on 6in—9in on 9in	do.	6/6	9/9	27/–½

IRON DRAIN PIPES—

Heavy cast iron socketed and laying and jointing in molten lead—	Per ft run 4in	6in
In main runs	16/6	23/6
In branches	18/6	27/–
	each	
Extra over last for bends and extra joint	30/2	66/1
Do. on do. for junctions and extra joint	67/–	135/–
Cast-iron gulley with 10½ inlet and 4in outlet, composed of hooper and trap, and 9in extension piece and 10½in grating, and jointing all together, and jointing to drain and surrounding in concrete	187/–	—
Do. rain water, shoe with vertical inlet and inspection cover, and joint up and embed	87/6	146/6

MANHOLE SUNDRIES—

		4in	6in
Salt glazed straight half-round main channels	each	6/–	8/7
Do. curved	do.	14/–	20/–
Do. three-quarter section splayed channel bends (Barrons or similar)	do.	18/–	26/6
Heavy manhole steps galvanized	do.	12/6	—
Fix only manhole covers	do.	12/–	—
4in Mica flap, brass faced, f.a.i. valves and fix with molten lead joint	do.	41/–	—

ROOFER

CORRUGATED ASBESTOS SHEETS

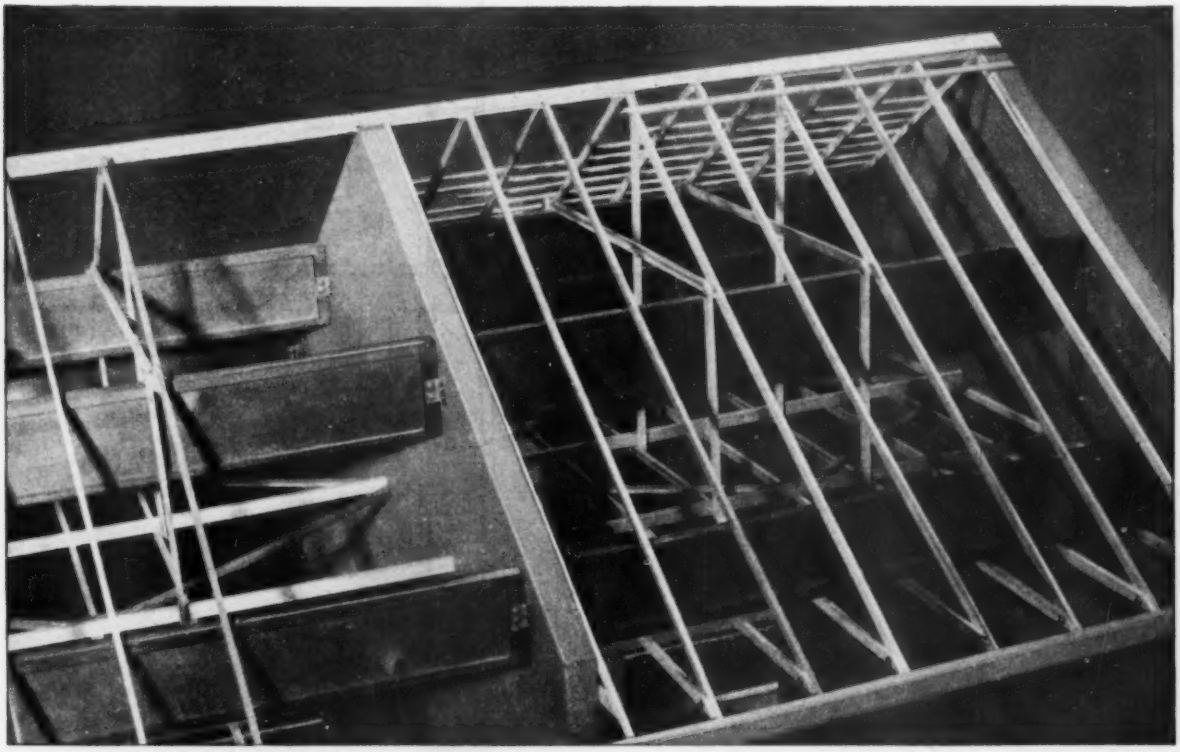
P.C. 8/3¼ per super yd including side and end laps and fixing to wood	167/– per square
Eaves filler pieces	2/6 ft run
Adjustable ridge	4/9 do.
Barge boards	3/4 do.
Plain roofing tiles, machine made, sand faced, 4in gauge nailed every 4th course with 1¼in galvanized nails, to battens (measured separately)	265/– per square
Extra over last for top edge or abutment cutting	1/4 ft run
Do. for double course at eaves	2/5 do.
Do. for verges, undercloak, bed and point	3/9 do.
Do. Valley tiles including cutting and waste on both sides	11/6 do.
Do. Bonnet hips and do. bed and point	12/– do.
Half-round ridge and bed and point	3/6 do.
Fixing soakers	1/8 dozen

Bituminous felt roofing in two layers, laid breaking joint and bedded with hot mastic and finished with fine dry grit	13/– yd
Do. but in one layer only	9/6 super

WELSH SLATING	Per square 16"+10"	18"+10"	20"+10"
3in lap, 2 zinc nails to each slate	356/–	376/–	473/–

Additional labours	Per ft lineal		
At tops, verges and abutments—straight	1/9	1/10	2/5
Do. —raking	2/7	2/9	3/7
At hips and valleys (each side)	2/7	2/9	3/7
At eaves, double course	3/6	3/9	4/9
Do. to falls	5/3	5/8	7/2

For modern roof construction in housing



NOTHING BUT WOOD

has all these advantages

Today, timber 'cross-wall' roofing is rapidly gaining ground in modern housing construction. This important new system offers:

- Outstanding structural and economic advantages in semi-detached and terraced housing schemes, as well as for certain types of blocks of flats
- Big economies in cost—'front' and 'back' walls are non-load bearing and require no foundations or elaborate footings
- When lightweight, low-cost timber infilling panels or curtain walling are used, overall cost is further reduced
- Greater freedom in interior planning, as 'cross-walls' support roofs and floors

Special roof designs for cross-wall construction have been prepared by the TDA. A folder containing plans of these, and further information, will be sent on request.

For full details of timber cross-wall roofing or timber curtain walling

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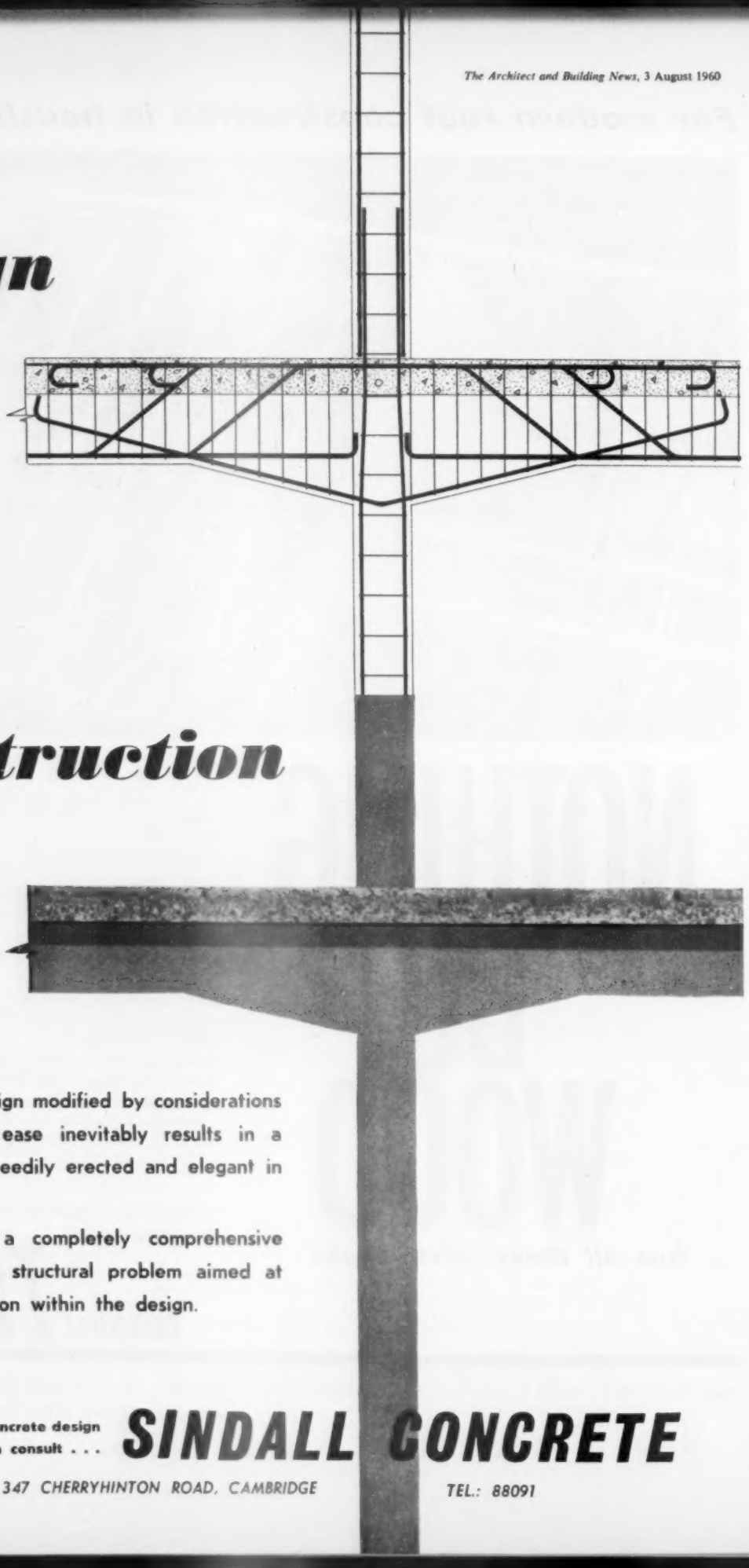


Practical design modified by considerations of constructional ease inevitably results in a sound structure speedily erected and elegant in appearance.

We adopt a completely comprehensive approach to each structural problem aimed at structural integration within the design.

For reinforced concrete design and construction consult . . .

SINDALL CONCRETE

347 CHERRYHINTON ROAD, CAMBRIDGE TEL.: 88091

FLOORS AND FLATS

Hollow tile *in situ* or pre-cast units hoisted, bedded and fixed—

Superimposed load in lb per ft super	Span 12ft	Span 16ft
50 ..	44/9	52/9
Per yd super 100 ..	47/–	59/–
150 ..	53/9	67/3

20lb has been allowed to cover dead load in surface, finish.

Fair edge to slabs	9*d* per ft run
Splay cutting and waste	1/9 do.

CARPENTER AND JOINER

SOFTWOOD CARCASSING—

Labour, materials, waste nails hoisting and fixing	Plates per ft cube 19/4	Joists per ft cube 20/10	Rafters per ft cube 22/7	Trusses per ft cube 26/–

FLOORING— Per square—	¾in	1in	1¼in
Rough boarding	145/–	172/–	204/–
Softwood batten flooring, straight joints, splayed headings ..	148/–	169/–	207/6
Do. grooved and tongued ..	169/6	191/6	246/–

SKIRTING— Per ft superficial	¼in	¾in	1in
Wrot softwood moulded skirting with grounds and backings plugged ..	4/–	4/8	5/3
Mitres to do. .. 3*d* per sectional in.			
Fitted ends .. 2*d* do.			

SASHES, fanlights, casements, borrowed lights, etc.—

Per ft super—	Without bars	With bars (2ft sup. in each square)
2in softwood rebated, moulded and fixed	3/6	6/5
Add if fitted with beads	6*d*	6/5
Add if hanging on butts	3/– each	

WINDOWS, hung on lines—

Softwood cased frames, 1in inner and outer linings, 1¼in pulley stiles, 2in sashes, oak sill .. Overall size of frames—

Per ft super	6ft	21ft	32ft	44ft
Windows as described ..	21/6	12/–	9/–	7/–
Add if sashes in squares, about 2ft super in each	—	1/8	2/2	2/2
Extra for hanging sashes with lines, weights and axle pulleys	each 38/–	66/–	77/–	88/–

FINISHINGS TO OPENINGS Per ft super—	¾in	1in	1¼in	1½in
Softwood linings, tongued at angles and tongued to frame including grounds and backings	4/8	5/3	5/10	6/4
Add if crosstongued	8*d*	8*d*	8*d*	8*d*
Softwood wrot rounded on front edge and with tongue at back window board including groove in sill and bearers	3/10	4/4	4/–	5/6
Add for ends to last notched, returned and rounded	1/1	1/2	1/3	1/4

Per ft run— Sectional area in in—	1	2	3	4	5	6
Softwood wrot and fixed in bearers, backings, grounds, fillets, and similar	4½*d*	7*d*	9½*d*	1/–	1/3	1/5
Add if in short lengths ..	2*d*	2*d*	2½*d*	2½*d*	3*d*	3*d*
,, if plugged to brickwork ..	6*d*	6*d*	6*d*	6*d*	6*d*	6*d*
,, if framed as in legs and bearers	3*d*	3*d*	4*d*	4*d*	6*d*	6*d*
,, if rebated or grooved or beaded	2*d*	2*d*	2*d*	2*d*	2*d*	2*d*
,, if chamfered or rounded edges				3*d*		
,, if moulded in architraves, capping, etc.				6*d*		

DOOR FRAMES Per ft run	6in	8in	10in	12in	13in
Per sectional in— Softwood, wrot, reb. & rdd.	2/3	2/8	3/2	3/6	3/10

DOORS—Per ft super Number of panels—	1	2	3	4	5	6
2in Softwood square framed and flat panels, both sides, on butts ..	6/–	6/10	7/5	8/–	8/4	8/10
1½in do.	5/4	6/2	6/7	7/2	7/7	8/1
Add for each side moulded	3*d*	4*d*	5*d*	6*d*	7*d*	8*d*
Add B.S. flush panelled	1/6	1/6	1/6½	1/7	1/8	1/8

Per ft super—	¾in	1in	1¼in	1½in
In shelves, table tops, wrot and fixed	2/5	2/9	3/4	3/9
Do. in divisions and ends framed ..	2/9	3/1	3/8	4/3
Add if crosstongued	6*d*	6*d*	6*d*	6*d*
Add if buttoned	6*d*	6*d*	6*d*	6*d*

SUNDRIES—Per ft run—	In short lgths	In long lgths	Add for cups and screws
Glazing, beads mitred around and fixed with beads	6*d*	4*d*	2*d*
Rounded heel or hollow ..		4*d*	
Tongued and grooved angle ..		6*d*	
Glue blocking		6*d*	
Mitres	3*d*	per sectional in	
Fitted ends	2*d*	do.	

STAIRCASE—	Per ft super
1¼in Softwood treads with moulded nosings 1in raisers tongued both edges and glued, blocked and bracketed on and including two fir framed carriages	6/6
Do. but in winders	8/–
1¼in crosstongued landing on framed carriages	6/3
2in moulded string	5/6
2in. do. ramped	14/–
Ends framed to newel	10/– each
Tongued heading joints	6/– do.
Ends of treads and risers housed to string ..	3/6 do.
Extra for curtail ends to steps, glued up and veneered riser and solid blocking	100/– do.

Balusters about 2ft 9in long, square and framed each end .. .. each	1in 2/6	1¼in 3/1	1½in 3/6
3½in by 3½in square newel, framed ..	4/– per ft run		
African mahogany moulded 3in by 2in hand-rail. (Joints below)	9/3		
Do. ramped 18in girth (do.)	54/– each		
Do. wreathed do. (do.)	160/– do.		
Joint or framed ends	12/– do.		

FIXING ONLY IRONMONGERY	To deal	To hardwood
Barrel bolts	2/–	3/– each
Flush bolts	5/9	5/– do.
Sash fasteners	3/–	3/6 do.
Rim locks and furniture	4/6	6/– do.
Mortice locks and do.	10/–	20/– do.
Cupboard locks	2/9	3/5 do.
Casement fasteners	2/6	3/– do.
Do. stays	2/6	3/– do.
Grip handles	3/–	3/6 do.
Spring catches	2/6	3/– do.
Cabin hooks	1/10	2/5 do.
Floor springs including oil	50/–	65/– do.
Overhead springs	15/–	20/– do.
Springhinges	15/–	20/– do.

SMITH AND FOUNDER

Basis framed steel joists and hoist and fix	80/– per cwt
Do. but in compound girders ..	90/– do.
Do. but in stanchions	92/– do.
Trusses	130/– do.
Additional cost per cwt over basic sections for following R.S.J.s 9in by 7in, 10in by 8in, 12in by 8in, 14in by 8in, 16in by 8in, 18in by 6in, 18in by 7in, 20in by 6½in, 20in by 7½in	8*d* per cwt
22in by 7in, 1/1 cwt, 4in by 3in	1/10 do.
5in by 3in, 5in by 2½in	2/2½ do.
6in by 3in, 24in by 7½in	2/6 do.
3in by 3in, 2/9 cwt, 4½in by 1½in.. ..	4/– do.
3in by 1½in	4/4 do.
Cleats, brackets, packing pieces, etc., in connections, including rivets and bolts	174/– do.
Forged straps	132/– do.
Wrot iron balustrade	175/– do.

RAINWATER GOODS

Round cast-iron pipe with socketed joints caulked with red lead and tow and fixing with pipe nails and gas barrel distance pieces to plugs in brickwork	Per ft lineal 2in 4/7½	3in 5/3	4in 6/7
Extra for shoes .. .. .. each	5/7	7/2	10/3
Do. junctions .. .. do.	8/5	10/9	15/7
Do. bends .. .. .. do.	6/7	8/6	10/10

RAINWATER GUTTERS Per ft run—	4in	5in	6in
Half round C1 gutters jointed in red lead and bolted and fixed on iron brackets	4/2	4/11	6/1
Ogee do. All as last	4/7	5/3	6/6
Extra for stop ends	3/4	4/1	4/3
Do. angles or outlets	5/10	7/5	8/9

PLUMBER

EXTERNAL—	Soakers	Flats	Flashings
4lb Milled Sheet lead per cwt	147/-	190/-	202/-

LEAD PIPES: running joints, etc.

Per ft run		½in	¾in	1in	1¼in	1½in	2in
Main	Fixed	4/5	6/-	8/3	9/7	13/6	18/-
Service	with	3/11	5/4	7/-	8/8	10/10	14/2
Waste	hooks	2/9½	3/11	5/1	7/2	7/9	10/-
Bends	each	—	—	—	1/9	3/-	8/-
Solder joints	do.	9/8	11/8	13/5	13/8	18/2	23/8
Union and joints	do.	14/2	17/1	21/4	27/2	—	—
Stop valve and *do.*	do.	27/10	37/10	52/-	82/6	—	—
Bib valve and *do.*	do.	19/8	27/-	—	—	—	—
Ball valve and *do.*	do.	26/9	36/9	52/6	80/6	—	—
Sleeve and *do.*	do.	—	—	—	—	21/6	29/7

COPPER TUBES

	½in	¾in	1in	1¼in	1½in	2in
Tubes per ft run	3/2½	3/10½	4/11½	5/9½	7/1½	9/1½
Couplings: straight each	3/-	3/6	5/-	6/10	11/6	15/10
Do. Elbows each	5/4	6/3	8/4	12/2	18/6	35/-
Do. Tees do.	8/7	9/11	13/3	19/-	28/7	39/9
Overflow bends	9/2	11/8	16/5	—	—	—
Stop cocks do.	22/-	31/6	50/-	77/-	97/-	153/-

BLACK TUBING (Heavy)

fixed with pipe brackets	½in	¾in	1in	1¼in	1½in	2in
Tubes, per ft run	2/4	2/7	3/4	4/-	4/8	6/1
Bends and fix, each	5/2	6/4	8/5	10/7	13/-	19/9
Tees and do.	5/8	7/-	8/4	10/7	12/11	19/-
Fire bends	2/2	2/9	3/1	3/4	4/5	8/-

Coated iron (M) weight L.C.C. soil and waste fixed with nails and distance pieces and molten lead joints	2in 5/11	4in 8/7	ft run
Extra only for bends and joint	15/3	24/5	each
Do. junctions and joints	16/10	30/8	do.
Do. cleaning doors	16/4	18/1	do.
Domical wire guards	2/6	2/9	do.

PLASTERER

		yd super
Lime and hair	¾in Render and set	7/3
Do.	1¼in Do. float and set	10/6
Sirapite	¼in Skimming coat	4/-
Do.	¾in Render and set	8/2
Do.	¾in Render, float and set	10/2
Portland	¼in Backing coat	4/10
Do.	¾in Plain face	8/3
Do.	¾in Floor screed	5/-
Keenes	¼in Skimming coat	5/3
Dubbing	¾in Thick or less	3/-
Metal Lathing	¾in mesh by 24 Gauge	7/-

6in by 6in by ⅛in Earthenware Plain Glazed Tiles, in fair quantity white, and setting (on prepared screed) .. 58/6

Rounded edge. Extra over last .. .. 6*d* per ft run

Angles in do. .. .. .. 6*d* each

Cutting and fitting. Around pipes or clips .. 1/6 do.

Narrow widths. 3in to 6in wide. Add 75 per cent to plain surface.

Do. 6in to 12in do. Add 40 per cent to plain surface.

Sundry labours per ft lineal:—

Quirk 3*d*. Arris 4*d*. Fair edge 3*d*. Rounded edge 5*d*.

Flush bead 1/9.

Mouldings—6*d* per in girth.

Jointing new plastering to old 4*d*.

POLISHING

	Ft super	6" Girth Ft run
NEW WORK—		
Staining, bodying-in and French Polish	3/-	2/-
Staining and wax polishing on hardwood	1/6	1/-
OLD WORK—		
Cleaning down old work and repolish	1/4	—
Stripping, preparing and repolishing	3/4	2/3

INTERNAL PAINTING

With white lead base in common colours, with brushes.

	Knot stop and prime	Prime and paint once	Prime and paint twice	Add for each extra coat
ON WOOD—				
General surfaces	2/9½	5/7	8/-	2/4 yd super
Running lengths not exceeding 3in wide	4½*d*	8½*d*	1/-	3½*d* yd run
Do. 3in to 6in wide	5½*d*	11*d*	1/4	4½*d* do.
Do. 6in to 9in wide	9*d*	1/6	2/1	7½*d* do.
Do. 9in to 12in wide	11*d*	1/11	2/7	9½*d* do.
Sash square each side	5/5	10/3	14/11	4/4½ per do.
Do. in large squares	8/3	15/-	21/-	6/7 do.
Opening edges	7*d*	1/2	1/9	7*d* each
Casement frames each side	6*d*	1/-	1/4	5*d* yd run
Mullions or transoms do.	8*d*	1/5	2/-	7*d* do.

ON PLASTER	One coat	Two coats	Three coats	
Paint on surfaces	3/1	5/10	8/3	per yd super
Do. on mouldings	3/5	6/5	9/2	do.
Do. on enrichment	6/2	11/8	16/6	do.
ON STEEL				
Paint on structural steel	2/5	4/7	6/10	do.
Do. on roof trusses	2/8	5/1	7/8	do.
Do. on metal windows measured over all on both sides, divided into squares	3/5	5/9	8/7	do.
Do. divided into large squares	2/10½	5/-	6/9	do.
Do. divided into extra large squares	2/5½	4/2	5/10	do.
Do. on opening edges	10*d*	1/6	2/-	each
Do. on rain water pipe	10*d*	1/6	2/2	yd run
Do. on do. gutter	1/3	2/8	3/7	do.
Do. on small pipe	3*d*	6*d*	10*d*	do.

GLAZING (to New Work)

Polished Plate Glass ordinary substance (about ¼in), glazing quality, in the following sizes, glazed complete—Per ft super

in plates not exceeding 2ft super in each			7/2
Do.	5ft	do.	8/3
Do. (unless extra sizes)	45ft	do.	9/7
Do. (unless extra sizes)	100ft	do.	10/2

Add extra price for glazing with screw beads or clips 5*d* per ft super.

Do. if glazing bedded in washleather or velvet 9*d* per ft run.

SHEET GLASS, glazed, complete, per ft super, in new work: Ordinary quality clear, glazed to wood with putty:—

24oz as described			1/7½
26oz do.			1/10½
32oz do.			2/3
⅛ figured rolled, glazed to wood with putty	Group 1	Per ft super	1/10½
	Group 2	do.	2/4½
Do. in standard tints		do.	2/10½
No. 1 Fluted, glazed do.		do.	2/5
⅛in Reeded (narrow, broad, etc.)		do.	3/2½
Reedlyte do.		do.	2/4
Spotlyte do.		do.	2/4
¼in Rough cast do.		do.	2/2½
¼in do. wired do.		do.	2/6
¼in Georgian Rough Cast do.		do.	2/6½

Add for glazing all as before but to steel to similar work as above, 1½*d* per superficial ft.

PAINTER AND DECORATOR

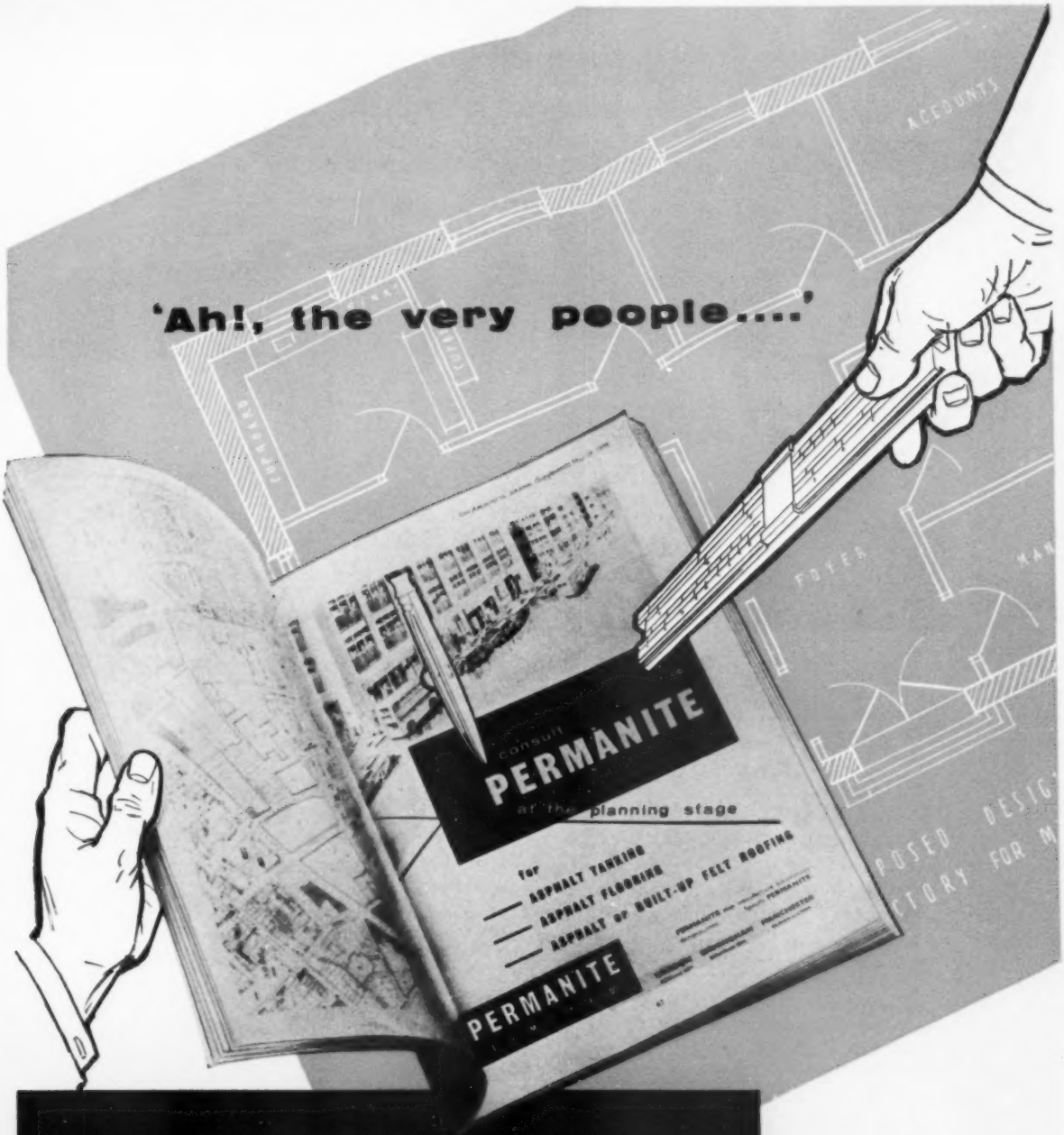
DISTEMPERING—In common colours, put on with brushes—

ON PREPARED SURFACE

per yd super—	1 coat (finish)	2 coats (undercoat and finish)	*Add* if required Sealing coat	Stippling
Ordinary distemper on flat surface of plaster	10*d*	1/6	6*d*	3*d*
Washable do. on do. of plaster	1/-	1/10	6*d*	3*d*
Add if in margins, narrow widths or panels	30%	30%	20%	50%
Add if on mouldings	50%	50%	45%	—
Add if on enrichments	160%	160%	115%	—

PAPERHANGING

Hanging only—	Per Piece	Lining	Pattern
On walls		7/6	9/-
On stairs		10/3	12/-
On ceilings		9/-	10/6



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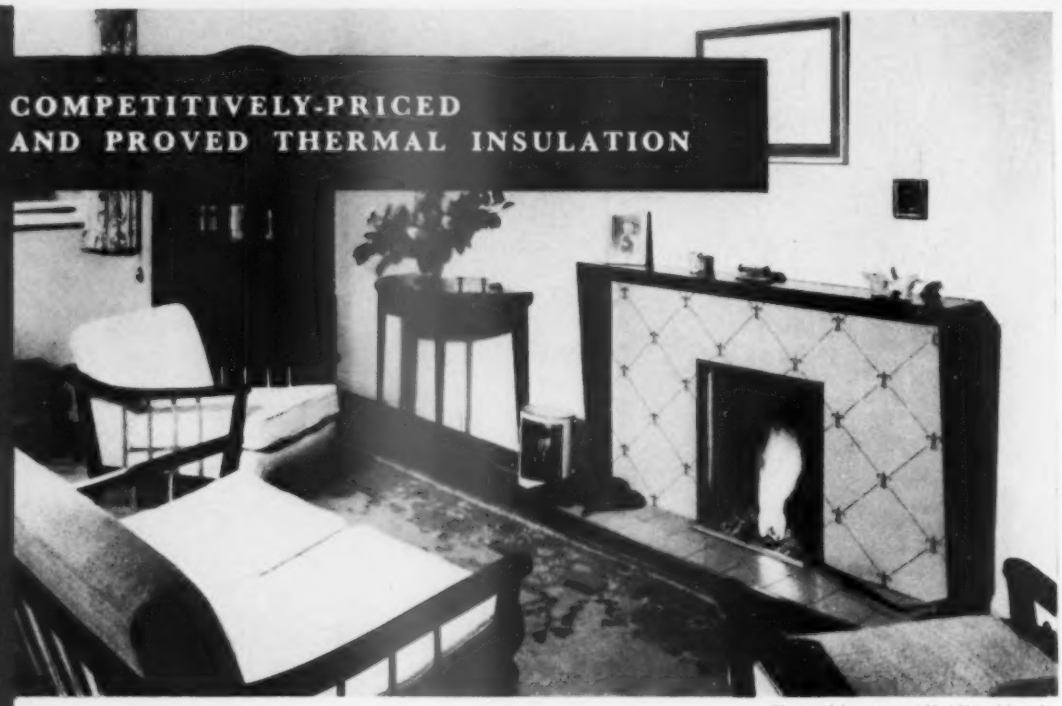

Photograph by courtesy of Ideal Home Magazine.

At "New Britwell", a house at Maidenhead. *Architect:* Michael H. H. Bayley, A.R.I.B.A.

PRACTICAL CONSTRUCTION

ROOF
Tiles on felt
2-3 inches slag wool.

CEILINGS
Plasterboard and skim coat.

EXTERNAL WALLS
Ground floor: 4½-in. brickwork, 2-in. cavity, 4-in. Thermalite, two-coat plaster.
First floor: Tyrolean rendering, 3-in. Thermalite, 2-in. cavity, 4-in. Thermalite, two-coat plaster.

PRACTICAL CONSIDERATION

The owner writes regarding the efficiency of the Thermal insulation.

"The only further comment that I can add after nearly three years' occupation is that the heating system was unnecessarily large, the bedroom radiators only being used occasionally and it is only during very cold spells that it has to be stoked more than every other day."

PRACTICAL CONFIRMATION

The thermal conductivity (k) of cellular concrete of 50 lbs. cu. ft. density according to the I.H.V.E. guide 1955 conditioned at 64° F/65% R.H.= 1.4 B.T.U.'s etc. This corresponds to the normal conditions in the average heated home during the winter months where a Thermalite inner leaf will have an equilibrium moisture content of approximately 4%

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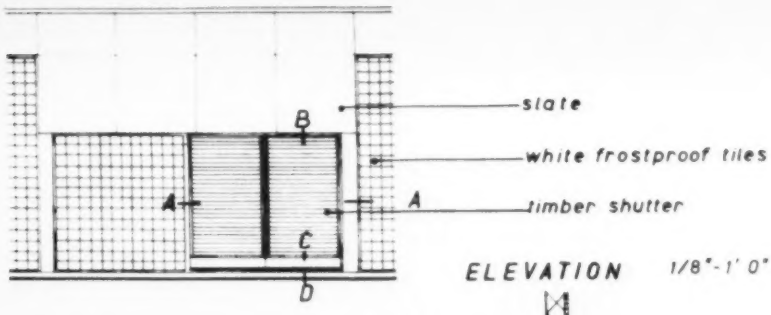
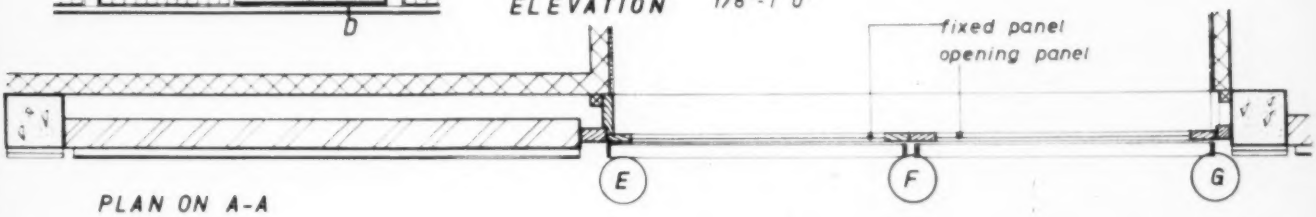


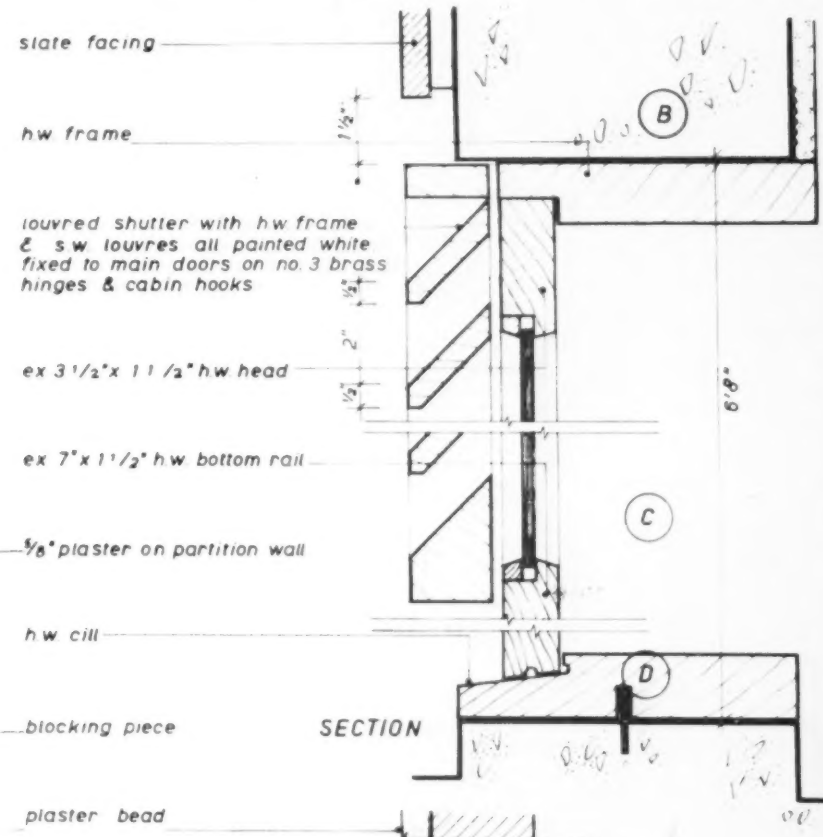
ELEVATION 1/8"-1' 0"



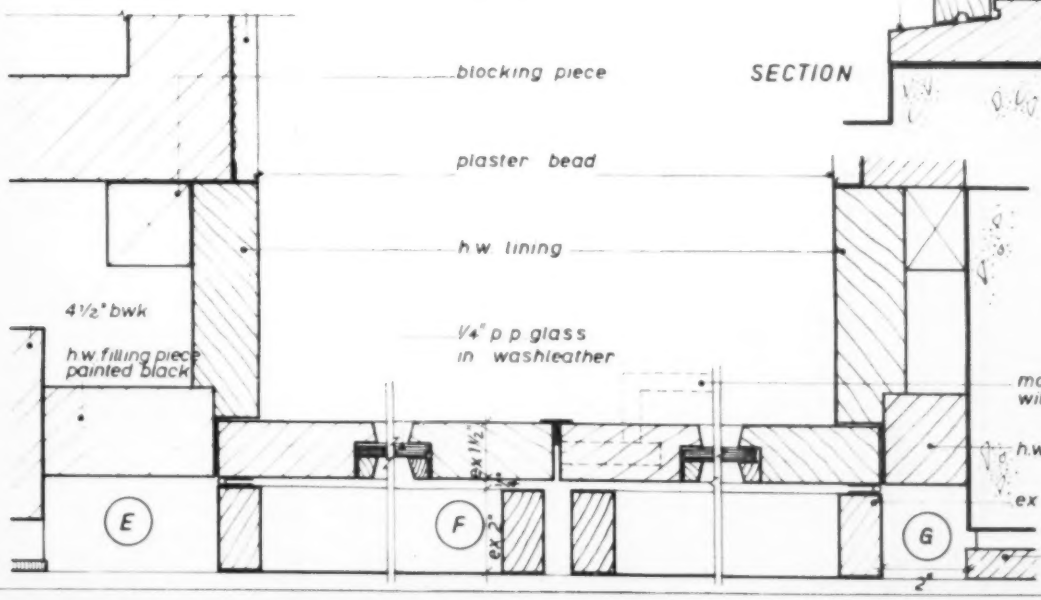
PLAN ON A-A

1/2"- 1' 0"

DETAILS ◦ 1/4 F S

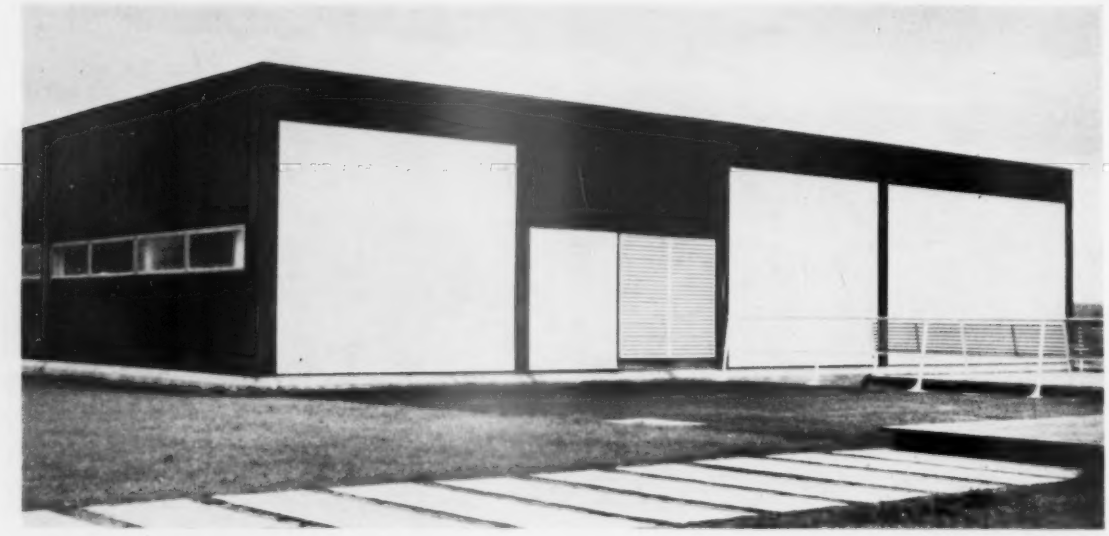


SECTION



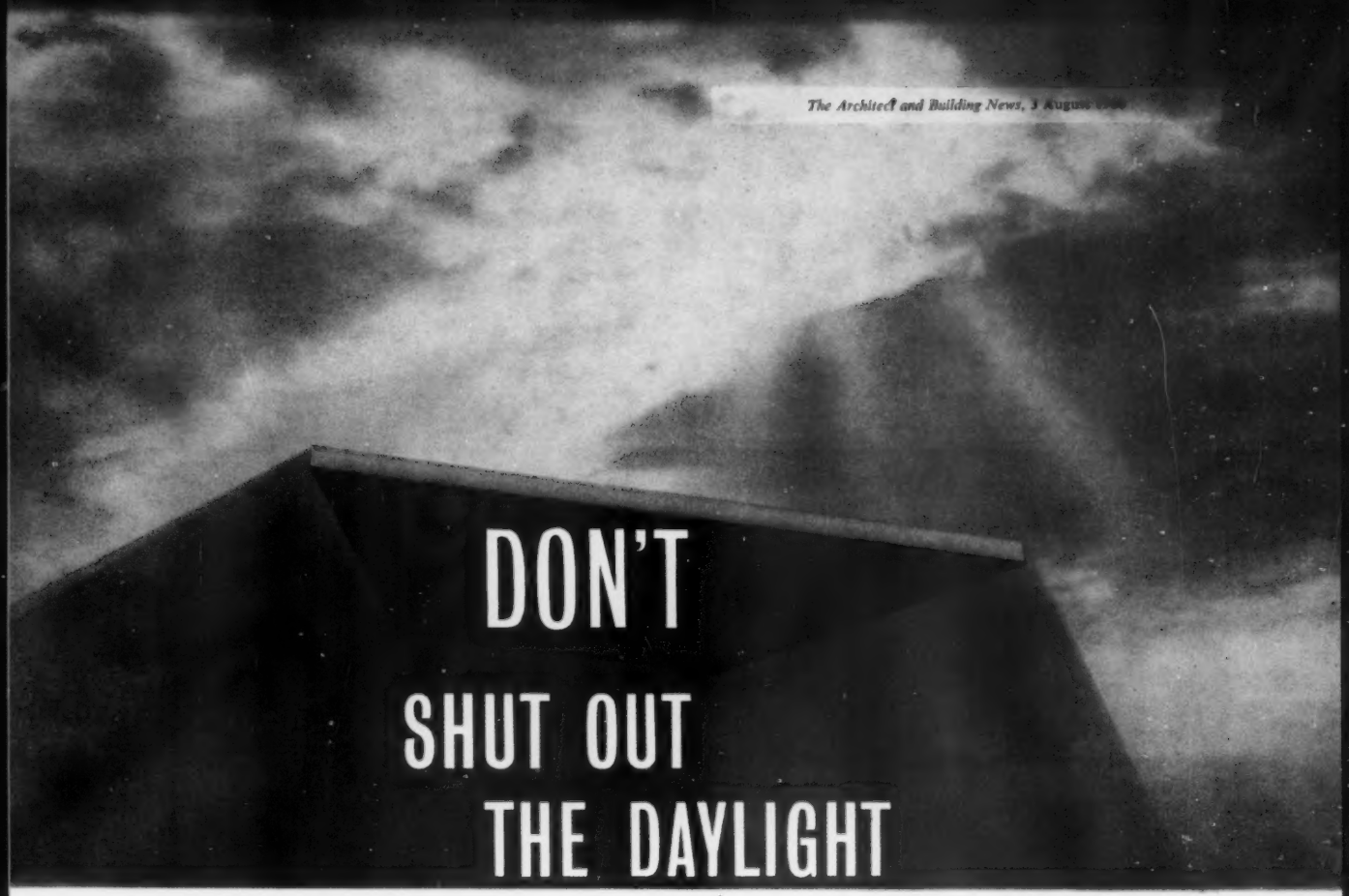
PLAN DETAILS

TERRACE DOOR OPERATING DEPARTMENT HOSPITAL SWINDON POWELL & MOYA



Access from the corridor of the Operating Department in the Princess Margaret Hospital at Swindon to the terrace is by means of this door. The outer leaf is in the form of a louvred shutter in softwood in a hardwood frame, and this is hinged onto the inner door which is glazed with ¼in polished plate. The louvres are painted white, the surrounds are black. Panels of white frostproof tiles adjoin the door with dark above. Black tiles are used on the adjoining elevations. Architects: Powell & Moya

TERRACE DOOR, OPERATING DEPT. HOSPITAL, SWINDON



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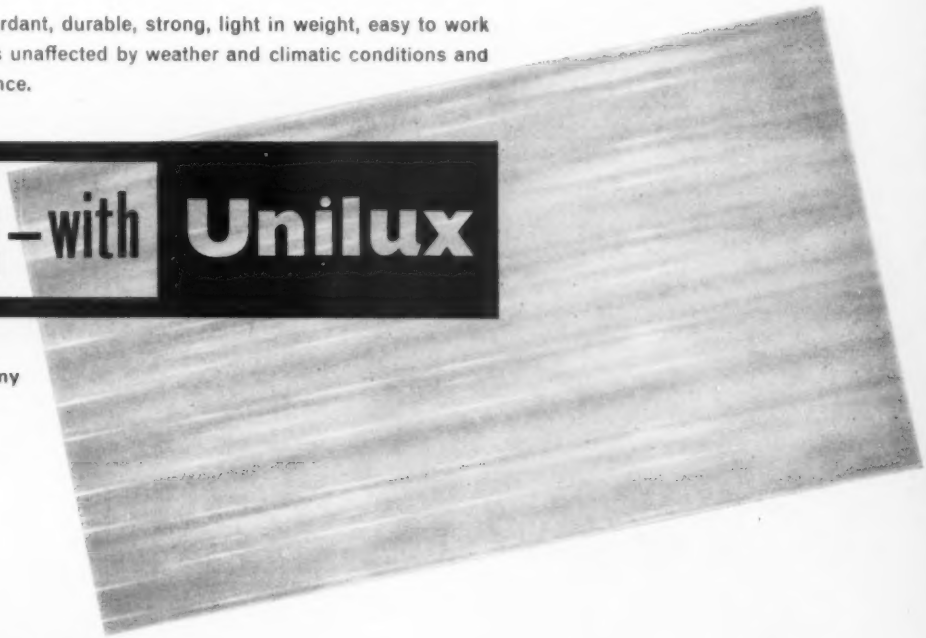

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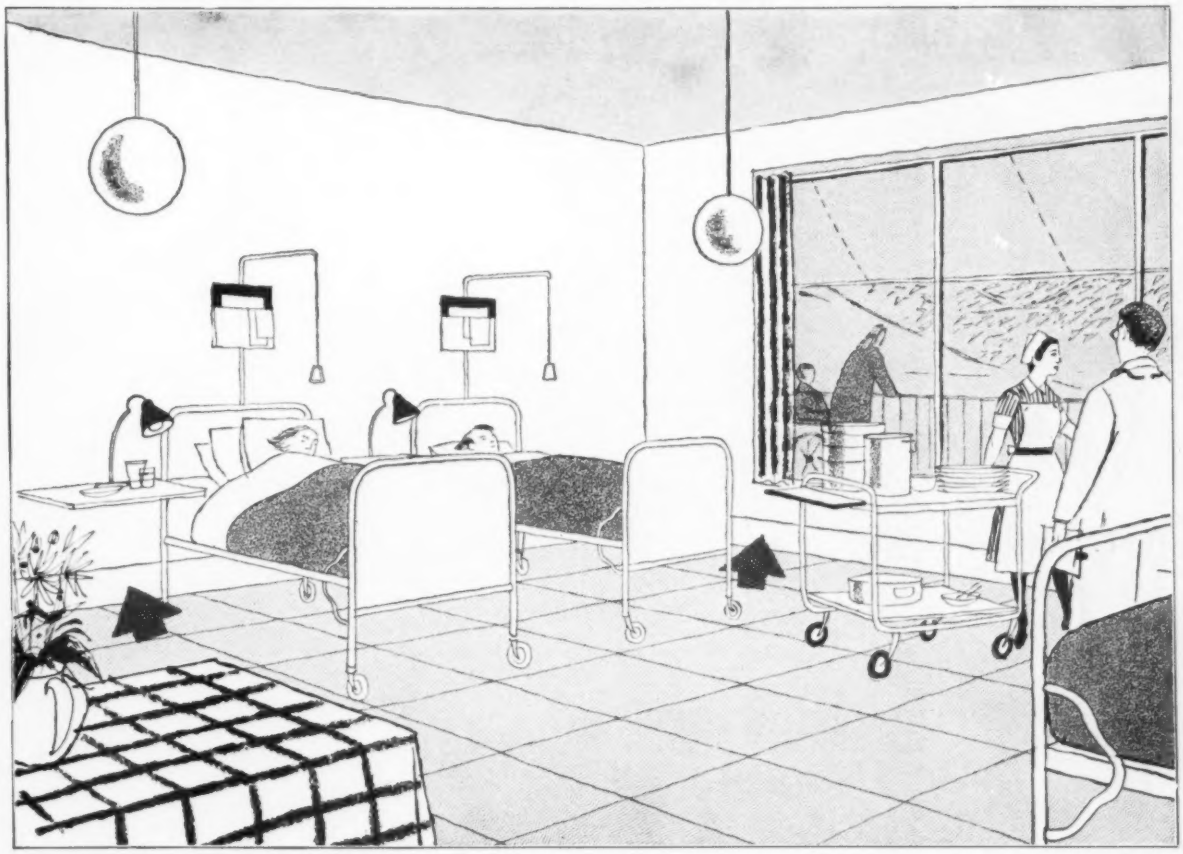

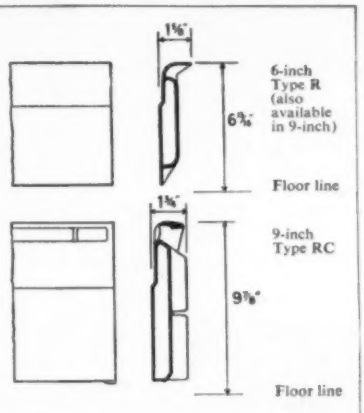

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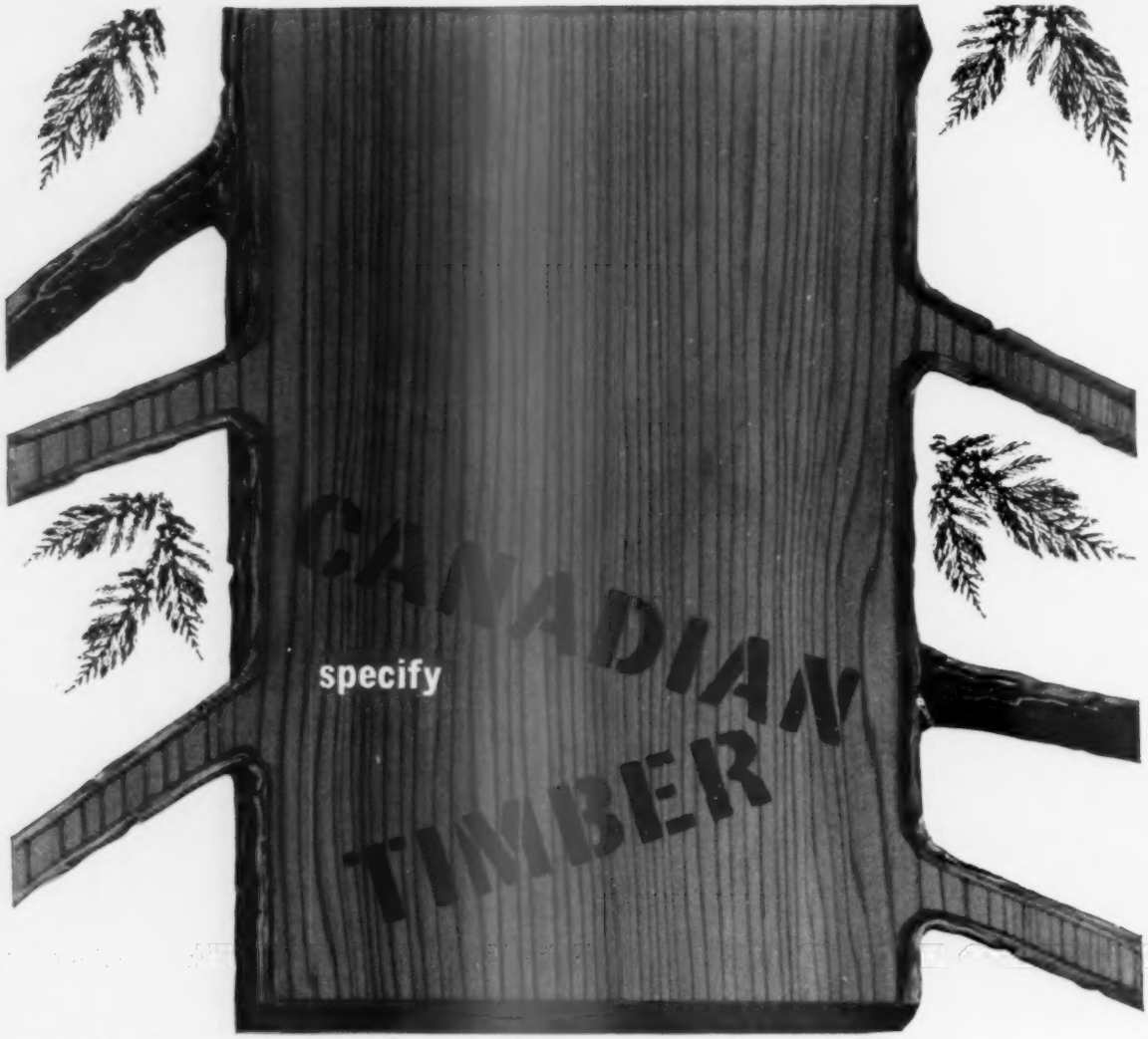
COMPLETE freedom in the disposition of the pieces of furniture in a room is always highly desirable, but probably never more clearly demonstrable than in the instance of the hospital ward. Here, one must pay full regard to flexibility in the placing of beds as well as to the need for daily ward cleaning. The question may be asked, which heating system will measure up to these stringent demands?

A heating system which finds favour with more and more architects faced with this sort of problem is Crane Skirting Heating. This system employs heating panels in place of the normal skirting boards and therefore (a) is unobtrusive; (b) is easy to keep clean; (c) is not obstructive to free arrangement; and (d) eliminates 'hot-spots'. In the accompanying illustration arrows mark the position of the panels.

Crane Skirting Heating panels are made in two types. Used here is the 9-inch Type R (radiant) which is also made in the 6-inch size for smaller heat requirements. Type RC (radiant-convector) is made only in the 9-inch size. All panels are in 2-ft and 1-ft lengths and are made of cast iron, which gives them considerable resistance to accidental damage. The operations of calculating heat requirements and designing the pipework are in principle no different from those for conventional radiator heating systems.

Wherever the architect needs greater freedom of expression than conventional heating systems allow him, and at the same time has to pay due consideration to costs, the answer is, undoubtedly,

CRANE skirting heating



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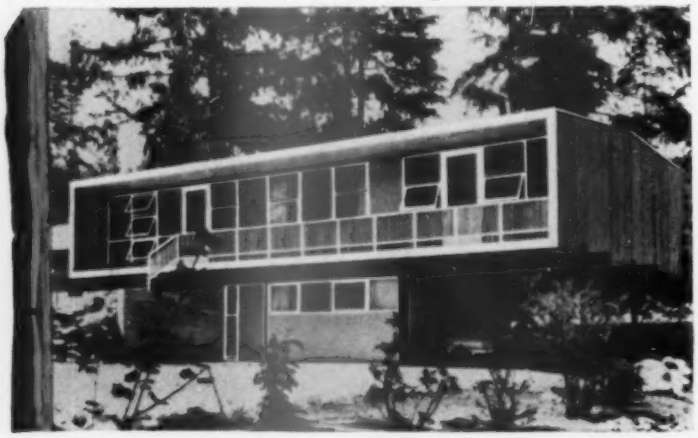

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Contract News

WORK IN PROSPECT

Coventry Corporation. An additional storey is to be erected at 36 Broadgate for John Sellright Ltd., estimated cost £2,900.

The welfare committee has approved sketch plans for an old people's home at Quinton Park, estimated cost £57,600.

Exeter C.C. The housing committee has approved plans for (a) the erection of six one-unit shops at ground floor level with yard space behind, single kiosk shop with three-storey office accommodation, six one-bedroom flats on the first and second floors and six maisonnettes on the third and fourth floors; (b) 19 garages at Heavitree Bridge. Tenders are invited.

The watch committee has approved sketch plans for seven three-bedroom houses, two two-bedroom flats and seven garages at the Police Headquarters, preliminary estimated cost £20,000.

Hampshire C.C. Erection of temporary classrooms at (1) Aldershot Manor Park county secondary boys' school, cost £3,000; (2) Basingstoke county high school, cost £3,000; (3) Cowplain county secondary school, cost £9,000; (4) Barton Peveril county grammar school, Eastleigh, cost £1,850; (5) Farnborough county grammar school, cost £3,000; (6) Hartley Wintney county secondary school, cost £3,000; erection of (1) two division room at Queen Mary's grammar school, Basingstoke, cost £2,300; (2) practical block at Priestlands county secondary school, Lymington, cost £20,000; (3) two additional classrooms in traditional construction at Bramley C.E. (controlled) primary school, cost £8,500; (4) garage accommodation at Winchester fire station, cost £7,600; conversion of existing accommodation into practical rooms, improvement of existing domestic science room and equipping of metal work room at Hardley county secondary school, cost £10,400.

London C.C. has approved (1) plans for a day special school for 100 physically handicapped boys and girls at St. Margaret's Crescent, Wandsworth, estimated cost £47,440; (2) a scheme for extending and improving Vauxhall Manor school, Lambeth-Vauxhall, estimated cost £68,800; (3) proposals for (a) improving the sanitary facilities for children and staff at Robert Browning county primary school, Southwark, estimated cost £8,125; (b) nursery schools on the Alton estate, Wandsworth, estimated cost £21,100 and on the Kingswood estate, Camberwell, estimated cost £21,345; (c) a nursery school at Carlsbad Street, Islington, estimated cost £14,300.

Londonderry. The housing sub-committee has approved plans for two blocks of combined shops, maisonnettes and flats on the Creggan estate.

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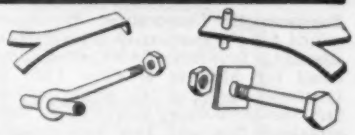
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156 Waterloo Road, S.E.1

Erection of the second extension to Portsteward primary school. Applications to C. G. Dalzell, A.M.I.S.E., Bath Street, Portrush, Co. Antrim.

Luton Corporation. Tenders are invited for the completion of the Challney secondary school extensions.

The New Forest R.D.C. Erection of a pair of semi-detached houses for firemen in Wellands Road, Lyndhurst, estimated cost £4,627.

Redditch U.D.C. The estates committee has approved a sketch plan for two-bedroom houses to be erected in Cherry Tree Walk. Tenders are to be invited.

Salford C.C. The Manchester Jewish Housing Association is to erect 30 flatlets in Tetlow Lane, Salford 7.

Shipley U.D.C. The public health and housing committee has approved a layout plan for 63 flats, seven old people's bungalows and 20 garages on the Rochester Street estate.

Smethwick Corporation. The Ministry of Education has approved preliminary proposals for the remodelling of the Firs open-air school.

Torquay Corporation. The harbour committee has approved final plans for the tiered car parking accommodation at Beacon Quay stores, estimated cost £80,000.

Walsall Corporation. Tenders are invited for an extension to the library in Elmore Row, Bloxwich.

SUBMISSIONS FOR PLANNING AND BYE-LAW APPROVAL

Bournemouth Corporation. Plans submitted for (1) erection of (a) warehouse adjoining Saunders factory, Wallisdown Road for McVitie & Price Ltd.; (b) 11-storey block of 41 semi-contained flats, two three-storey blocks of six semi-contained flats and two semi-detached houses with garage accommodation for 41 cars in Wimborne Road for Deerdale Properties Ltd.; (c) three-storey block of nine semi-contained flats in Cavendish Place for Mr. K. N. Gomersall; (d) sports pavilion, café and maisonnette in Central Drive, Meyrick Park for the Corporation parks committee; (e) seven-storey block of 25 flats with garage accommodation for 25 cars in East Overcliff Drive for Atlas Homes Ltd.; (f) three-storey block of six semi-contained flats and six garages in Grosvenor Road for Keythorpe Developments Ltd.; (g) 12-storey block of 66 flats with caretaker's quarters, garage and parking accommodation in Grove Road for Regina Court (Bournemouth) Ltd.; (h) five-storey block of nine semi-contained flats with nine garages under in St. Catherine's Road for Mr. A. D. Smith; (i) six-storey block of 28 flats with 11 garages and five-storey block of 12 flats with eight garages in Surrey Road for Park Investments Ltd.; (j) two three-storey blocks of six semi-contained flats and 10 garages in Surrey Road for Drewsons Ltd.; (k) 15 bungalows and garages in Venning Avenue for Bournelands Ltd.; (2) conversion of No. 7 Cavendish Place into five semi-contained flats and erection of four garages for Mr. W. Travis; (3) alterations and additions to Nos. 4, 6 and 8 Exeter Road for Fortes (Bournemouth) Ltd.; (4) layout for (a) two three-storey blocks of eight flats and 16 private garages in Darracott Road for Dellaford Developments Ltd.; (b) eight-storey block of 21 semi-contained flats with garage accommodation for 21 cars under in Durley Road for Mr. A. Leonard; (c) light industrial building in Haviland Road for Durley Properties Ltd.; (d) three-storey block of 12 semi-contained flats and 10 garages in Portarlington Road for Mr. R. J. Palmer; (d) six-storey block of 18 semi-contained flats and 12 garages in Sandbourne Road for Capt. G. Rawlings; (d) three-storey block of 18 semi-contained flats and 14 garages in West Cliff Road for Mr. P. W. Norman; (e) three- and five-storey blocks of 26 semi-contained flats with covered car parking accommodation in West Cliff Road for Mr. J. Hunt; (f) six-storey block of 24 semi-contained flats with garage accommodation for 24 cars under in Dean Park Road for Mr. F. Gardner; (g) 10-storey block of 40 flats and garage accommodation under in Manor Road for Mr. J. Gordon; (h) five-storey block of 12 semi-contained flats with nine garages under in Poole Road for Mr. E. J. Curtis; (i) four-storey block of 12 flats and garage accommodation for 10 cars in Portarlington Road for Mr. N. Vere-Hodge; (j) eight bungalows in Talbot Rise for Mrs. Maidment; (k) five industrial buildings in Wallisdown Road for Mr. M. Chapper.

Chelmsford Corporation. Plans submitted for erection of (a) 37 houses and garages and layout of roads, footpaths, services, etc., for Road "E" and in Ravensbourne Drive, Beech's Brickfields for Cooper Estates Ltd.; (b) church and parsonage in Kings Road for All Saints' Church Council, submitted by C. Stone; (c) two blocks of five terraced houses in Seymour Street for Duncan Cameron & Hutchinson; (d) office and factory on the Widford Industrial estate for Horner & Wells Ltd.; (e) motor showrooms, repair workshop and petrol service station in Gloucester Avenue for J. E. Rogerson; (f) offices and factory in Beach's Drive for Windley Bros. Ltd.; (g) three-storey office building, extension to existing offices and workshop in Victoria Road for C. W. Poole & Sons; (d) four additional classrooms, library and cloakroom at St. Philip's Priory; (e) five workshops, 18 one-unit garages and ancillary work in Brockley Road for Turp & Blackburn Ltd.; (f) 347 houses and 85 one-unit garages in Gordon Road, Alder Drive, Heath Drive, Maple Drive, Arbutos Close, Hornbeam Close, Fir Tree Close, Plane Tree Close and Magnolia Close for Moulsham Development Ltd.; (g) 11 shops with 12 flats over and 23 garages in New Springfield Park estate and two three-storey blocks of flats and maisonnettes and 27 garages in Torquay Road and Bodmin Road for Percy Bilton Ltd.; (i) Roman Catholic church in Melbourne Avenue for the Reverend Father E. Keenan; (j) motor showroom, refreshment bar and toilets at The Stadium, New Writtle Street for Chelmsford City Football Club Ltd.

Hampstead B.C. Plans submitted for (1) erection of nine houses and garages in Fairhazel Gardens and Fairfax Place; (2) conversion of (a) No. 85 Canfield Gardens into four flats; (b) No. 41 Steeles Road into seven flats and caretaker's quarters.

Newbury Corporation. Plans submitted for (1) erection of (a) pair of bungalows and garages in Kiln Road for Tile Barn Estates Ltd.; (b) four bungalows in Turnpike Road for C. F. Giles; (2) extension to garage workshop in Albert Road for Elliotts of Newbury; (3) outline application to erect four detached houses and garages at Redfield House, London Road for Newbury Laundry Ltd.

Paddington B.C. Plans submitted for conversion of hotel in Craven Hill into 12 semi-contained flats.

Portsmouth C.C. Plans submitted for (1) erection of (a) petrol service station in London Road for Shell Mex and B.P. Ltd.; (b) polishing bay, rest room, toilet block and car wash bay for Linnington Bros. Ltd.; (c) licensed premises with shop and living accommodation above in Ludlow Road and Blakemere Crescent for Geo. Gale & Co. Ltd.; (d) canteen for De Havilland Aircraft Co. Ltd.; (2) extension to (a) Nos. 163/173 Commercial Road for Marks & Spencer Ltd.; (b) showroom and workshop in Kingston Road for Haywards Motor Cycles; (3) alterations and extensions to No. 6 High Street, Cosham for David Greig Ltd.

Redditch U.D.C. Plans submitted for erection of (a) three-storey flats on Lodge Park estate for Lodge Park Developments Ltd.; (b) two pairs of houses off Enfield Road, Hunt End for T. F. Hemming; (c) pair of semi-detached houses in Arrow Road for Messrs. Bray & Butler.

Rotherham Corporation. Plans submitted for (1) erection of (a) church hall at St. Saviour's church, Fitzwilliam Road for the Rev. A. B. Johnston; (b) 76 bungalows and garages at Spinneyfield, Lane End Road and Garden Crescent for Walter Dunk & Sons Ltd.; (c) 10 houses in Poucher Street and two houses in West Hill for C. A. Wilding (Builders) Ltd.; (2) extension to (a) shop in Effingham Street for Cantors Ltd.; (b) warehouse in Wheathill Street for Norton Grinding Wheel Co. Ltd.; (c) 12 Moorgate Road, for North Central Wagon & Finance Co. Ltd.; (d) plating shop in Wortley Road for Robert Jenkins & Co. Ltd.

Sedgley U.D.C. Plans submitted for (1) erection of (a) two pairs of houses in Musk Lane, Lower Gornal for L. Spittle Ltd.; (b) two detached houses in Gospel End Road, for Five Oaks Estates Ltd.; (c) 15 bungalows and two detached houses in Southerndown Road for Brownswall Estates Ltd.; (d) three pairs of semi-detached houses in Elizabeth Avenue for Avion Properties Ltd.; (e) factory for light engineering on Dormston Trading estate, Burton Road, Upper Gornal for Messrs. Wentworth & Farnell; (2) extension to machine and storage shop at Coopers Bank, Lower Gornal for Biggons (Dudley) Ltd.; (3) conversion of Richmond House, Coton Road into six flats for W. D. Whiddon; (4) layout of (a) cul-de-sac and erection of seven dwellings in Wolverhampton Road for Avion Properties Ltd.; (b) cul-de-sac and erection of 24 dwellings in Valley Road for the U.D.C.

Smethwick Corporation. Plans submitted for (1) erection of (a) service station in Rolfe Street for Davis Haulage (Smethwick) Ltd.; (b) warehouse in Spon Lane for Crance Bros. Ltd.; (2) extension to fabric shop at Cranford Street for G. K. N. Reinforcements Ltd.; (3) alterations to (a) engineers' shop in Roebuck Lane and to New Camshaft Foundry at North Works, Dartmouth Road, both for Midland Motor Cylinder Co. Ltd.

Southwark B.C. Plans submitted for erection of (a) four-storey block of six shops, three flats and six maisonnettes in Old Kent Road, Wates Ltd., for Streatham Property Investments Ltd.; (b) 12-storey office block with shops at ground level and two-storey almshouses, both in Blackfriars Road; (c) five-storey building with basement for use as shops, showrooms, warehouse and ancillary offices in Blackfriars Road, R. Siefert & Partners for D. E. & J. Levy.

Stretford Corporation. Plans submitted for (1) erection of (a) three houses in Kenwood Road and Longford Avenue for L. N. Harrison; (b) 12 one-bedroom flats in Urmston Lane, W. Wolfson; (c) opensided warehouse in Trafford Park Road for Springfield Warehousing & Wharfage Co. Ltd.; (2) conversion of the Lyceum Cinema in City Road/Malvery Street into a social hall for Rev. Father Dorran.

Surbiton Corporation. Plans submitted for (1) erection of (a) 12 flats and garages in Maple Road; (b) nine flats and garages in Hook Road; (c) 30 flats and 33 garages in Lovelace Gardens; (d) 20 flats and 17 garages in St. Mark's Hill; (2) extension to (a) factory in Davis Road for Marsden & Shiers Ltd.; (b) factory in Red Lion Road; (c) St. Mary's church, Church Lane; (3) additions and alterations to Fleetwood Service Station in Leatherhead Road; (4) rebuilding and extension at (a) the Old Mill, Old Malden Lane; (b) 125/127 Red Lion Road.

Torquay Corporation. Plans submitted for (1) erection of (a) nine-storey block of 54 flats on Kilmorie site in Ilsham Marine Drive for Kilmorie (Torquay) Ltd.; (b) factory, store, showroom and office off Hele Road for H. L. Denley; (2) outline application for (a) supermarket in Union Street and Pimlico for Lynton Holdings Ltd.; (b) pair of houses in curtilage of 49 Princes Road West for F. Addis; (c) pair of houses and bungalow in Water Lane for L. J. Wyatt Ltd.; (d) four- and two-storey blocks of 16 flats, 16 garages, two flats for caretaker and gardener on the Southwood site in Middle Warberry Road for T. C. Ibbitson; (3) addition of linotype and writers' rooms at 16 Braddons Hill Road West for The Western Times Co. Ltd.

Tynemouth Corporation. Plans submitted for (1) erection of (a) four shops with flats over on Moorhouses estate, North Shields, submitted by W. M. Coulson for Sleightholme Ltd.; (b) two ground and two first floor shops in Heaton Terrace/Coast Road, North Shields, W. M. Coulson for Mr. S. Storer; (2) internal alterations to convert two shops into one shop at Nos. 12/14 Percy Park Road for Moores Group (Organisation) Ltd.; (3) extension to Sheet Metal Works in Clive Street, North Shields, Messrs. Wood & Pigg for G. S. Robinson & Co. Ltd.; (4) four-storey luxury flats at Beverley Villas, Mast Lane, Cullercoats for Mr. F. L. Hall.

Wakefield Corporation. Plans submitted for (1) erection of (a) canteen at Bective Mills, Bective Road, submitted by Messrs. Kay, Hartley & Waite for Harrap Bros. (Sirdar Works) Ltd.; (b) two pairs of semi-detached houses off Smirthwaite Street for R. W. Bagnall; (2) demolition of corn exchange building, Westgate and erection of shops with ancillary accommodation, showrooms and offices submitted by Ardin & Brookes & Partners for Metrovincial Properties Ltd.; (3) alterations and extensions to shop at Kirkgate for The Home and Colonial Stores.

Watford Corporation. Plans submitted for (1) erection of (a) two maisonnettes and two garages in Aldenham Road for Rollis Ltd.; (b) three three-storey blocks of flats and 18 garages in Ellwood Gardens for Croxley Estates Ltd.; (c) factory and office accommodation on Holywell estate for A. A. Polishers & Platers; (d) two blocks of four flats each, one bungalow and eight garages in High Road, Leavesden for S. & K. Darvill Ltd.; (e) single-storey clinic for spastics for Hertfordshire Spastics Society and paper storage building at factory for Odhams (Watford) Ltd., both in St. Albans Road; (f) main offices for railway freight terminal in Balmoral Road for British Transport Commission; (g) shop, bakery, restaurant, etc., in Upton Road/Exchange Road for P. Buck Ltd.; (h) "The Beaver" public house in Courtlands Drive for Benskin's Watford Brewery Ltd.; (i) joiners' assembly shop, stores, canteen and flat in Bushey Hill Lane for M. & E. Developments Ltd.; (2) demolition of existing buildings and construction of a shop for production of transformers in Sandown Road for Transformers (Watford) Ltd.; (3) extension to (a) factory and erection of garage for two cars in Greenhill Crescent, Holywell estate, for Abrasive Plades Ltd.; (b) factory off Wiggenhall Road for T. H. Simmons; (c) factory in Lower High Street, for The Ever Ready Co. (Great Britain) Ltd.; (4) redevelopment of existing depot comprising a two-storey office block, pump houses and vehicle sheds in Cow Lane for Shell-Mex & B.P. Ltd.

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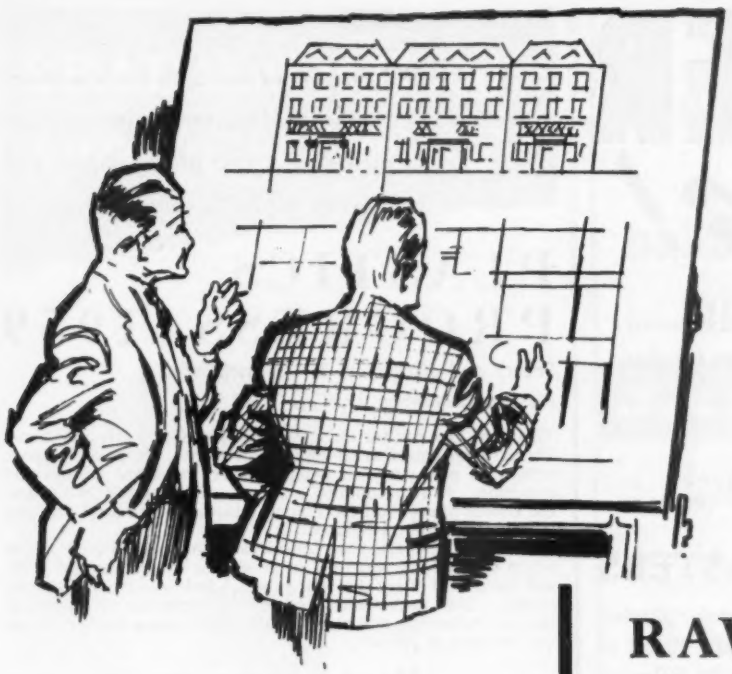

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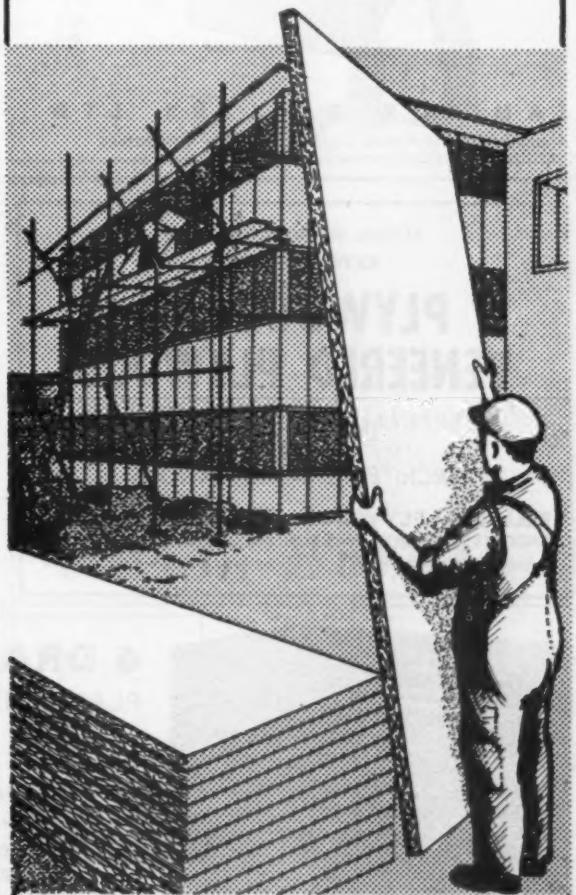

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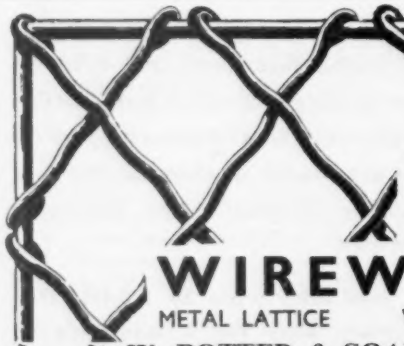

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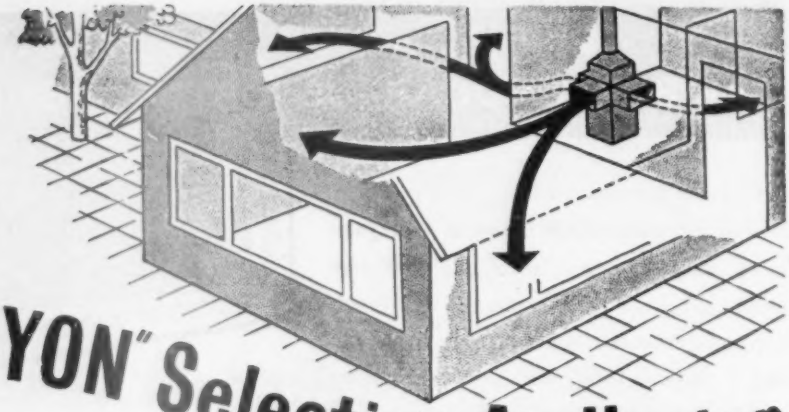

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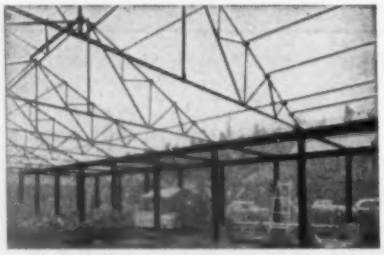

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(Grade A.P.T. I £610-£765 p.a.)

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Appointments subject to N.J.C. Conditions, superannuation, medical examination and one month's notice, in writing, on either side.
Housing accommodation available if required.
Applications stating age, training, qualifications (if any), present and previous appointments and experience together with the names of two referees to arrive by Monday, August 15, 1960. The post applied for must be clearly stated.

(sgd.) A. V. WILLIAMS,
General Manager.

Churchill House,
Newton Aycliffe,
Nr. Darlington. [6800

The Architectural Association
School of Architecture

THE Council of the Association invite applications for the post of **SENIOR STRUCTURES LECTURER,** beginning November 1, 1960. Salary £1,300 p.a. The appointment requires attendance at the A.A. School equivalent to three-and-a-half days a week in term time, in addition to the time required for lectures. Facilities are available for the Senior Structures Lecturer to undertake private consultant work. Full particulars of the appointment may be obtained from the Secretary, Architectural Association, 36 Bedford Square, London, W.C.1. Candidates should give full information about their academic career and training, and the names of two referees. All applications to be submitted by October 1, 1960. [6813

County Borough of West Bromwich

APPLICATIONS are invited for the following appointments:—
Senior Assistant Architect. A.P.T. IV (£1,065 to £1,220 per annum).
Architectural Assistants. A.P.T. I (£610 to £765 per annum).
Applications, stating age, qualifications and experience, together with the names and addresses of two referees, should be sent to the undersigned by August 10, 1960.

W. H. GREENWOOD,
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West Bromwich. [6794

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The department has in hand a large and interesting programme of works for School Buildings, Technical Colleges, Old People's Homes, Fire Stations and other County Buildings which will be designed under the direction of MR. WHITFIELD LEWIS, F.R.I.B.A., the County Architect. Organization is on a group basis and full scope will be given to Architects who show design ability.

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Application forms (s.a.e.) from The County Architect, 1 Queen Anne's Gate Buildings, Dartmouth Street, S.W.1, returnable by 10th August. (Quote C.979.A.B.N.)

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309 Regent Street, W.1
SCHOOL OF ARCHITECTURE, SURVEYING AND TOWN PLANNING

APPLICATIONS are invited for the undermentioned posts in the School of Architecture. Duties to commence as soon as possible.

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A form of application, which should be returned within two weeks of the publication of this advertisement, may be obtained from the undersigned.

J. E. RICHARDSON,
Director of Education.
[6824

University of Cambridge
Department of Estate Management

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Applications, giving educational background, examinations passed, etc., and accompanied where possible by copies of recent testimonials, should be sent to the Chief Clerk, Department of Estate Management, 74 Trumpington Street, Cambridge. [6827

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Borough Engineer's Department
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Applications stating age, qualifications and experience, together with copies of three testimonials, to be sent to H. W. Morris, B.Sc.(Eng.), A.M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor, Council House, Stourbridge, not later than August 25, 1960.

A. P. DRURY,
Town Clerk.

Council House,
Stourbridge.
July 27, 1960. [6825

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Architect's Department

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Assessors:—Professor Frank Fielden, M.A., F.R.I.B.A., Glasgow.
Jack Howe, Esq., F.R.I.B.A., F.S.I.A., London.

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Last day for submitting designs, August 30, 1960.

Conditions may be obtained from the Controller of Sales, The Scottish Gas Board, Glasgow and Western Division, 9 George Square, Glasgow, C.2. [6810

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Premiums: £250 : £150 : £75.

Last day for submitting designs: September 26, 1960.

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OCCUPATION

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Architect: Eric Lyons, Esq. F.R.I.B.A.

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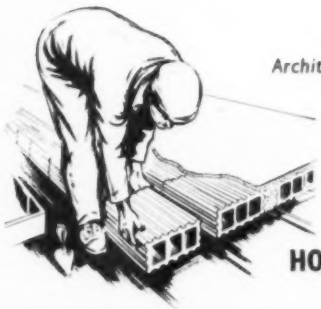

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Architects: Messrs. Clyde Young & Bernard Engle, F/A.A.R.I.B.A.

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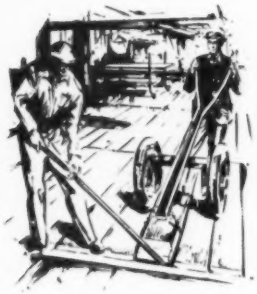

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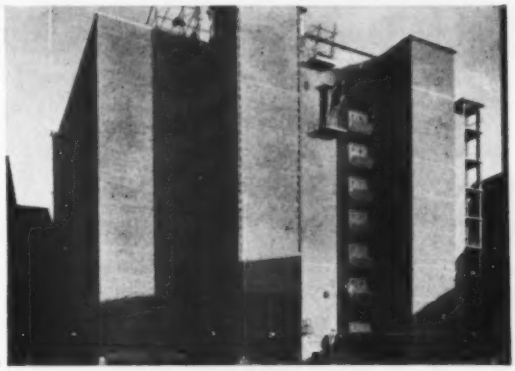
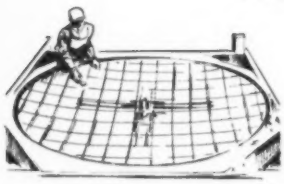


Summit Photo Plate Co. Ltd.
Architect: J. V. Hamilton, Esq., F.R.I.B.A.
Staff Architect: Messrs. Cluttons.



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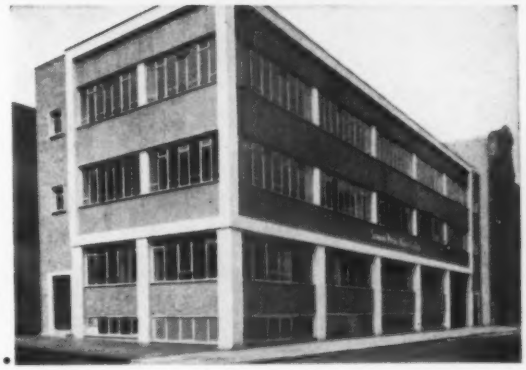

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